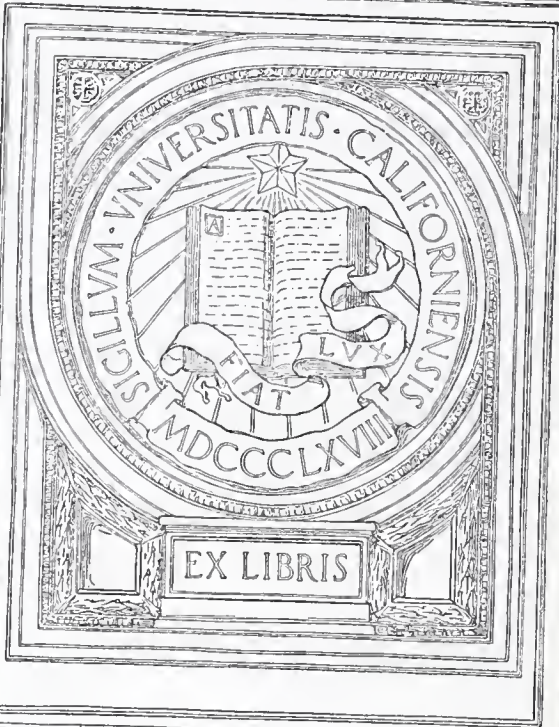




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# Index

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MAINE MEDICAL ASSOCIATION



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INDEX  
Volume Forty  
Guide

January	Number One	Pages 1- 34	July	Number Seven	Pages 173-202
February	Number Two	Pages 35- 58	August	Number Eight	Pages 203-250
March	Number Three	Pages 59- 74	September	Number Nine	Pages 251-276
April	Number Four	Pages 75- 98	October	Number Ten	Pages 277-314
May	Number Five	Pages 99-124	November	Number Eleven	Pages 315-344
June	Number Six	Pages 125-172	December	Number Twelve	Pages 345-385





# The Journal of the Maine Medical Association

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## "A CLINIC FOR HARD OF HEARING CHILDREN"\*

FREDERICK T. HILL, M. D., JOSEPH J. SATALOFF, M. D.

The problem of the Hard of Hearing Child is something like Mark Twain's observation on the weather: It's been discussed for years but very little has been done about it. This paper is presented in the hope of stimulating a more positive program for these children here in Maine. We will endeavor to show its significance, and the importance of the general practitioner in this program. We feel that such a program should be based upon the development of clinics for the hard of hearing children as the most effective means of meeting this problem. In describing our clinic at the Thayer Hospital we hope to encourage the establishment of similar clinics strategically located throughout the State.

The general practitioner has a major role in solving this problem of the Hard of Hearing, and the Deaf Child. It has been estimated that over two million school children in this country have some degree of hearing impairment. This is a most significant figure as these children create economic and social problems of vast proportions. Because they are hard of hearing, they frequently are compelled to repeat grades in school at an average cost of \$117.00 per year for each grade repeated. Equally important, however, is the social cost of truancy and other forms of anti-social behavior so prevalent among children who are made to feel they do not "fit in" with their classmates. Depriving these children the special care they need often prevents them from

potentiating their capabilities and from becoming useful citizens.

It is most important to detect and evaluate hearing impairment as early as possible so that the proper therapy can be instituted. The general practitioner is frequently the man who can do the most in this respect. When a mother brings a child to the physician and complains that Johnny is three or four years old and still cannot speak or speaks poorly, or that the child seems backward in school and disinterested, not seeming to pay any attention, the first thought that should arise in the mind of an alert physician is "Can this child hear?" All children with speech disorders, especially with sybylants; or with histories or signs of chronic ear infections should be referred to an otologist for careful study.

It is important to differentiate Deafness and Hearing Impairment. The Deaf are those whose hearing is non-functional for ordinary purposes. Even with a hearing aid these people have no serviceable hearing left. This deafness may be congenital or it may be acquired later in life by accident or disease. They present a different problem from those whose hearing is impaired but is useful with or without a hearing aid.

There are several distinct types of hearing impairment. All of these require careful evaluation as well as treatment, both medical and in the form of aural rehabilitation.

A conduction type of hearing impairment is one in

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\* From the Otological Service, Thayer Hospital.

which the sound, to some degree, is prevented from reaching the inner ear and auditory nerve. It is most frequently caused by some obstructing condition such as impacted cerumen or middle ear infections. It, alone, never causes complete deafness, for if spoken to loudly enough, these people can hear. The patient with this type of hearing loss commonly speaks in a low voice. A special kind of conduction loss is otosclerosis in which the stapes become fixed in the oval window and prevents proper transfer of sound waves. The fenestration operation has been proving successful in certain patients with this latter type of loss.

In a nerve type of hearing loss, or so-called perceptive deafness, there is damage to the end organs of the eighth or auditory nerve. This may be congenital or may be caused by meningitis, certain of the exanthemata, certain drugs used prenatally, gun explosions, exposure to industrial noises and, in some cases, by senile changes. These people commonly speak in a loud voice, for they cannot hear themselves and do not realize they are shouting.

It is not uncommon to find a mixed type of hearing impairment, combining both the conductive and perceptive types of loss.

The conductive type of loss is the most suitable one for definitive medical treatment. Not only may proper treatment obviate any further hearing impairment, but in many cases, considerable improvement may be obtained. On the other hand, if neglected or incorrectly treated, the patient may be done a grave injustice. In certain cases, a well performed tonsillectomy and adenoidectomy may be indicated; in others, irradiation of the nasopharynx, eustachian inflation, treatment of otitis media, sinusitis or allergies might be called for. But to continue inflating the eustachian tubes of a patient with nerve deafness or to remove his tonsils and tell him his hearing will improve, is to create a further obstacle in the future rehabilitation of that patient.

It must be kept in mind that deafness is a symptom of some condition involving the conducting mechanism of the ear or the auditory nerve, or both, and that, once established, is largely irreversible. Consequently, treatment should be directed against the underlying cause and be instituted as early as possible, in an effort to prevent permanent impairment. When this is impossible and we realize we are dealing with an irreversible condition, much still can be accomplished. Fenestration in certain selected cases, amplification by means of hearing aids and rehabilitation by specialized educational procedures, all are of tremendous help in redirecting the patient to a useful and happy place in society.

All youngsters who have a degree of hearing impairment, regardless of the type, which interferes with their ordinary communication should receive, in addition

to medical treatment, some form of aural rehabilitation. All of them must be taught to actively listen and pay strict attention to all sounds. They must be carefully instructed how to get the most out of their residual hearing. The otologist is interested, not in how much hearing is lost, but in how much remains and how to make that particular patient use it most effectively. In addition to active hearing, a youngster should be taught speech reading. This includes the coordination of lip reading, the interpretation of facial expressions, and an intuitive grasp of the conversational trend. Therefore, psychological guidance is of extreme importance to the hard of hearing youngster and his parents. Every effort must be made to teach him speech if he has little or none, and to maintain proper speech if deafness comes later in childhood.

In detecting an early loss of hearing in a child, the physician may prevent future serious disability. If he has the foresight to suggest otological examinations and hearing tests for every youngster who has had meningitis, mumps, or whose mother has had german measles during pregnancy, he is a real pioneer in this most important field. Detecting deafness in a two, three or four-year-old child, is often a very difficult matter. Clapping hands behind a child or stamping or banging a door and watching his reaction is no proof that he can hear, for he may feel the vibrations without actually hearing them. It requires patience, skill, and much experience to evaluate a hearing impairment in a child. This should be done by a specialist well equipped in the field. The earlier a diagnosis is established and appreciated, the more effective the over-all result. There are practically no deaf or hard of hearing children who cannot be made into better and more useful citizens if given the needed medical attention. We must educate the public that being hard of hearing is a common medical condition and deserves no stigma.

The American Academy of Ophthalmology and Otolaryngology, through its committee on the Prevention of Deafness, has been endeavoring to educate both the public and the medical profession to the importance of early recognition and adequate treatment of the Hard of Hearing Child. As an essential component of its program, it has urged the establishment of clinics throughout the country where these cases could be properly cared for. In many states a really comprehensive program has been developed.

Here in Maine we have been handicapped by the lack of funds and facilities. For years we have had a statute requiring the annual testing of hearing in all school children but generally, this has been carried out haphazardly, and little or nothing done about it. And, after all, there is little use testing these children if preventative or remedial measures cannot

*Continued on page 12*



## GLAUCOMA IN YOUNG ADULTS\*

HOWARD F. HILL, M. D., and RICHARD H. DENNIS, M. D.

In the minds of most general physicians the disease glaucoma is associated with an older age group of patients. However, it can occur in the young adult age group or at any age. Occasionally, the presence of the condition in this younger age group is not recognized early, with consequent tragic results. This is most unfortunate, for if diagnosed in time, most of these cases can be maintained for many years with useful if not full vision and with nearly normal tension. The early symptoms are indefinite and are often attributed to more common disorders such as eye strain due to overwork or poor glasses, or dismissed as just another headache.

According to most authoritative sources, Glaucoma is a condition characterized by increased intraocular pressure. Associated with this are certain clinical changes, as loss or blurring of vision, loss of visual field, and perhaps pain, as well as pathological changes such as cupping of the optic disc, optic atrophy and obliteration of the filtration angle of the anterior chamber of the eye.

We are primarily interested in delineating those symptoms which will aid in the early diagnosis of glaucoma in the young adult. For this purpose it is advisable to divide these cases into two categories. The one is chronic simple glaucoma with its insidious unsuspected onset. The other is acute congestive glaucoma. It is the former which is the most dangerous as it may be far advanced before any trouble at all is recognized by the patient or the doctor.

In the chronic simple type the patient often complains only of a fleeting, frequent headache of a minor nature, perhaps after being in a dark place such as at the movies. He may venture the observation that his vision seems blurred sometimes when he has a headache. These periods are usually transitory. He may say that at night the headlights of approaching cars bother him and when questioned more exactly may state that he sees the classical haloes around the lights. Early symptoms may be no more than this. When examined, this patient almost always shows a white quiet eye. The iris, however, is sluggish and partially dilated and may appear faded and more atrophic than its fellow. Many doctors who are not Ophthalmologists acquire considerable skill in the use of the ophthalmoscope. With this instrument it is usual to see some degree of cupping in the optic nerve. Also the ocular tension usually will be elevated. This may sometimes be differentiated

merely by a comparison of the two eyes by palpating them through their closed lids.

If the above findings be seen in a young individual it would be advisable to refer him to a competent ophthalmologist. He can do more definite tests among which the most valuable are the visual field, accurate tension readings, provocative tests and the obtaining of daily variations of the tension through readings taken for 48 hours at 4-hour intervals. Provocative tests are often relied upon to establish the final diagnosis, but can be quite dangerous. The tension may elevate sharply, converting a chronic case into an acute one.

The other type of early glaucoma, which may be seen in young adults, is the acute congestive form. These individuals usually have a very narrow exit for the passage of aqueous out of the eye, the "narrow angle" type. They may go along many years with the aqueous just filtering adequately but with no reserve. Then one day, frequently following an emotional upset, the angle closes down due to hyperemia of the tissues and the filtration is no longer adequate. The aqueous "dams back" and the tension mounts rapidly. They have much pain and prostration, and immediately seek care.

When these patients are questioned they almost always give a history of previous minor prodromal attacks. These attacks consist of transient blurring of vision, minor pain and headache, all occurring at the same time. These episodes are usually short. They often occur in the early morning (4-6 a. m.), when the intraocular tension is normally at its peak anyway. If examined at this time the eye will show a circumcorneal redness. The pupil is usually semi-dilated and does not respond to light. The cornea is apt to be cloudy. The tension is commonly elevated enough to be appreciable to the fingers. This eye is obviously more acute than that harboring a chronic simple glaucoma.

The acute phase has severe symptoms which bring the patient to the doctor and which usually suggest glaucoma at once. There is sudden diminishing or complete loss of vision, exquisite pain in the eye itself and severe shock-like systemic symptoms so that the patient may actually be prostrated. He frequently vomits, perspires, has chills and feverish feelings. The signs in these cases are acute injection of the eyeball, fixation of the pupil in dilated or semi-dilated position, cloudy cornea with shallow anterior

\* From the Ophthalmological Service, Thayer Hospital.

chamber, edema of conjunctiva and lids and a stony hard very tender eye.

It is obvious that those cases having acute attacks will receive prompt care. The ones for which we must be on the alert are the ones with the early vague indefinite complaints of chronic simple glaucoma.

The symptoms of the less acute type are:

1. Headaches — especially those occurring in a dark place, such as a movie house.
2. Dull ache or pain about one or both eyes.
3. Frequent ocular fatigue uncorrected by glasses.
4. Occasional blurring of vision.

The signs are:

1. Diminished visual acuity (Not always present).
2. Sluggish pupillary reflex. May be semi-dilated or even fixed.
3. Shallowness of the anterior chamber with narrowing of its angle. However, the chamber may be deep in the so-called deep-chamber type.
4. Faded atrophic appearance of the iris (later).
5. Generalized atrophic appearance of eye—such as whitish blue sclera (late).
6. Dilatation of the episcleral veins.

Illustrative of the insidious onset is the following case report.

Miss B., white healthy female, age 23, seen Oct., 1946, with the complaint of headache and a tight feeling over the eyes. This headache had no relation to close work but seemed to come on with fatigue and after attending the movies. External examination was normal; anterior chamber normal depth; pupils of normal size and reactivity. The tension was not taken; fundi were normal. A normal muscle balance and a small astigmatic refractive error completed the findings. No cycloplegia was used.

This patient was next seen one year later complaining of intermittent aching about the right eye, most often after attending the movies. External examination was again negative. The slit lamp revealed no shallowness of the anterior chamber. Tension was 20 Schiotz o.u. Fundi were normal although there was venous pulsation of the disc of the right eye that was not noticed before. The retinal veins did not appear enlarged. Perimetric fields were nor-

mal. Complete physical examination was reported negative, including X-rays of the sinuses and skull. She was instructed to report any further symptoms and to be checked up in a few months. As her symptoms subsided she did not return. She was next seen 10 months later when she was referred back by an ophthalmologist whom she had seen while in Boston, because of a sharp reoccurrence of pain about the right eye, accompanied by blurred vision. The doctor reported he had found the right pupil dilated, tension of 48 Schiotz in both eyes and reduced visual acuity in both eyes. The tension was reduced to normal with miotics before she left Boston. Seen here a few days later while still using 1% pilocarpine tid., this patient showed definite signs and symptoms of glaucoma. The anterior chambers were quite shallow, the pupils somewhat dilated, the tension was 42 Schiotz in both eyes. The discs were normal but the retinal veins were distended in both eyes with a ratio of 3 to 1 and pulsation over the right disc. There was no cupping of the disc and the only field defects were bilateral enlargement of the blind spot. Her only complaint was a dull ache about the right eye and slightly blurred vision. Visual acuity with correction was 20/40 od and 20/20 a.s. Slit lamp measurement showed marked narrowing of the angle and later gonioscopic examination revealed nearly complete closure of the angle with the iris almost in contact with the cornea.

The subsequent course of the patient has been stormy and she finally came to a bilateral operation.

In summary the main point to be stressed in this case is the insidious onset which may occur in certain types of glaucoma and the necessity of always being alert for the possibility of glaucoma in the young adult.

It is also significant that even when glaucoma was suspected and with an alert and intelligent patient an early diagnosis was missed. This patient probably had a latent glaucoma when seen the first time and certainly when seen the second time should have been kept under closer observation for a long enough period to establish definitely a diagnosis. Even with the negative findings and normal ocular tension and perimetry fields the history alone should have been significant enough to have made the proof of the absence of glaucoma our responsibility.

Much could be learned about the epidemiology of tuberculosis if we could encourage the participation of more general practitioners in field studies throughout the country. The routine use of the tuberculin test on every person who visits the rural doctor's office would uncover a surprising number of hidden and unsuspected cases of tuberculosis. The examination of family contacts and a search for the original

spreader leads the family physician away from his relentless daily routine into exciting by-paths of epidemiologic investigations. Through the utilization of modern methods of diagnosis and follow-up the rural physician extends the frontiers of knowledge of this puzzling disease. — Herman E. Hilleboe, M. D., *Journal-Lancet*, June, 1947.



## INFANTILE CORTICAL HYPEROSTOSES\*

### Case Report

By CLAIR S. BAUMAN, M. D., and MOSES F. LUBELL, M. D., Waterville, Maine

In July, 1945, Caffey and Silverman<sup>1</sup> published a preliminary report on a new syndrome which they entitled, "Infantile Cortical Hyperostoses." The principal features of the disease were enumerated by them, as, "onset in the early part of the first year; tender swellings in one or more of these sites—face and jaws, scapular regions and extremities; and multiple scattered hyperostoses, demonstrated roentgenographically in bones adjacent to the tender swellings and also in bones whose overlying soft tissues appear to be normal, clinically and roentgenographically."

They presented studies of four cases. In all cases the maternal history was normal with normal birth histories. There were no evidences of prenatal deficiency of vitamins or obstetrical trauma. The onset was usually in the first three months of the first year with the development of tender swellings in various parts of the body. The swellings were not hyperemic. The cases that were observed from the onset, showed fever and hyperirritability.

In contrast to the multiple massive soft tissue swellings and extensive hyperostoses, there was a striking absence of severe constitutional manifestations in all stages of the disease. The swellings developed exceedingly rapidly according to the parents' reports, and subsided slowly. At no time was there clinical evidence of hemorrhage or suppuration in these swellings.

Laboratory findings were made on the observed cases which give little information of positive diagnostic value. Serological reactions for syphilis were negative in all cases. Studies on the quantitative concentrations of ascorbic acid in the blood and urine did not support the diagnosis of scurvy. Agglutination tests and blood cultures, smears and cultures did not show evidence of bacterial infection. Blood studies did not show evidence of hemorrhagic disease.

Biopsies of the affected bones were done in three cases and showed only hyperplasia of the lamellar cortical bone. There was no evidence of neoplasm, nor of acute inflammation, nor of subperiosteal hemorrhages.

Study of the roentgen findings showed that the cortical thickenings did not extend the entire length of the shafts in the extremities but left the terminal segments unaffected. This finding is opposite to the

appearance in the subperiosteal hemorrhages of scurvy. The absence of all basic scorbutic changes supports the laboratory findings of ascorbic acid concentration.

The active manifestations subsided after several weeks and there were no serious complications. The cortical thickenings gradually diminished and disappeared completely after several months.

Caffey and Silverman concluded by discussing the differential diagnosis. Syphilis and scurvy can be dismissed on all counts. Neoplasms were not found on biopsy. Infection could not be excluded, although bacterial infection was not proven in any case. The authors were inclined to the theory that the hyperplastic osteitis was secondary to an unproven virus infection. They referred to several pathological reports indicating that virus infections during early infancy may be more common than is generally appreciated. Allergic reactions were also discussed as a possibility.

During the same period that Caffey observed his cases, Dr. F. S. Smyth and colleagues independently studied a group of seven cases at the University Hospital, San Francisco, which appear to be of similar nature. They published their report in April, 1946.<sup>2</sup> Their cases showed varying degrees of periosteal reaction in different parts of the skeleton, with laminated onion-peel structure of cortical new bone. No symptoms of scurvy were found. The blood levels of vitamin C were not low. Biopsies showed no hemorrhages nor neoplasms. All of their cases under one year of age (5) showed brawny facial edema with soft swelling over the mandibular periosteum.

Their cases did not respond to sulfonamides. They ran a benign course with apparent spontaneous recovery. This also contradicted sarcoma. Biopsies of the soft tissues showed fibrosis, degeneration and atrophy of the skeletal muscle.

The descriptions of the clinical course of their patients were similar to Caffey's cases. The onset was characterized usually by irritability, fever, and anemia leukocytosis. All the cases survived, most clearing completely.

Whipple<sup>3</sup> in February, 1947, reported a case which was studied in Providence, Rhode Island. The findings were similar to the cases described by Caffey and Smyth. In addition, there was involvement of the skull and the bones of the calvarium. Penicillin and sulfadiazine proved to be of no value in this case.

A case was reported in Philadelphia in 1947, by

\*From the Pediatric and X-ray Services, Thayer Hospital.

Kane and Borzell.<sup>4</sup> A child was studied from the onset, at the age of three months, to the age of two years. They described a rapid development of the lesions with irritability, fever and leukocytosis; and a slow but continuous regression, uninfluenced by any therapy.

Delano and Butler<sup>5</sup> reported a similar case in Chicago, in 1947. The child was seen first in 1944, at the age of three months. The onset, X-ray findings and clinical course were very similar to the cases previously cited. In their discussion of the etiology of the condition, they excluded neoplastic, metabolic and traumatic causes and concluded that the cause must be inflammatory. The illness began following a smallpox vaccination. They discussed the possibility of an osteomyelitis variolosa or vaccinia. They emphasized that most of the reported cases showed a febrile episode.

In view of the newness and comparative rarity of this syndrome, we are presenting a case which came under our observation.

Baby R. G., age two and one-half months, was seen with the presenting symptom of apparent inability to use his left arm. The parents quite suddenly became conscious of the fact that he was fussy and irritable. He cried when he was picked up and, a day or so later, it was noticed that he was not using his left arm which hung limp at his side when he was picked up.

The infant's past history was essentially negative. The father and mother were recently married with negative premarital serological tests. They were both in good health. The baby had had a relatively easy low forceps delivery. The mother thought that he was premature but his birth weight of seven pounds, fourteen ounces appeared to contradict this. He breathed normally without cyanosis. He had received orange juice and cod liver oil in his diet, which was satisfactory, and he had made good growth progress. Trauma was suspected although there was no history suggesting it.

The physical examination revealed a somewhat fussy, slightly pale, well developed and nourished infant of two and one-half months, with a temperature of 101.6 degrees. His exact weight was not available. Eyes and ears were essentially normal. The nose showed no snuffles, or obstruction. The oral mucous membranes were pale, and the teeth were not erupted. The throat was negative. No obvious swelling was noted over the jaws. There were no palpable cervical nodes, no torticollis or stiffness of the neck. The chest was symmetrical, without evidence of rachitic rosary or of Harrison's groove. The expansion of the lungs appeared to be equal and tactile and vocal fremitus normal. The breathing was clear and vesicular throughout. The heart showed no enlargement to percussion, no thrill or murmurs. Sinus

arrhythmia was present. The liver was palpable one inch below the right costal margin. Neither the spleen nor the kidneys could be felt. The genitalia were normal. The knee jerks were present. Kernig's sign was negative. While being examined the infant cried considerably, especially when his left arm, which he held at his side, was moved. On palpation, the left forearm was found to be enlarged, hard and tender. The upper arm was not affected nor was his right arm.

The urinalysis was negative. The blood count showed 4,120,000 R. B. C., 10,450 W. B. C., polys 15%, lymphs 81%, eosinophiles 1%, 2 stab cells and 1 monocyte. The blood Hinton was negative.

Roentgenologic Examination: The left arm was first examined, with the right for comparison. This revealed thickened cortical bone which was laminated in appearance, along the entire length of the shaft of the left ulna. This did not involve the extremities. (Fig. I) The other bones of the arm were normal,



FIGURE I  
Hyperostosis of Left Ulna.

as was the opposite arm. Because of this finding examination of the rest of the skeleton was made. Hyperostotic changes were found in the mandible. (Fig. II) An unusual finding was an area of irregularity of the outer table of the left parietal bone. In-



vestigation later suggested this to be the sequelum of a cephalhematoma which had been noted shortly after birth.

Because of the unusual nature of the bone changes, the diagnosis was in doubt. There were no findings pathognomic of rickets or scurvy, and the case was not considered typical of congenital syphilis which was improbable from the family history. Caffey's syndrome was suggested, and a study of the available literature indicated that this was the diagnosis. The films were shown at the X-ray conference at the Pratt Diagnostic Hospital and four roentgenologists present, who had seen cases of this condition, agreed that it was a classical example.

Subsequent examinations showed some hyperostoses of the pelvic bones. The lower extremities and the ribs and clavicles were not involved. The child made an uneventful recovery during the next four months. The last examination of the left ulna showed definite regression of the hyperostosis. (Fig. III) The child is now in good physical condition and uses the arm freely.

Summary: A case is described which appears to be a typical example of the syndrome described by Caffey and Silverman in 1945, as Infantile Cortical Hyperostoses and often called Caffey's Disease. The literature and theories as to the etiology of the condition are reviewed.

Note: Since writing this report, another case showing similar findings in an arm has been seen and is under study.

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FIGURE II  
Mandibular Hyperplasia



FIGURE III  
Left Ulna 4 Months Later, Showing Regressive Changes

## HYPERTENSION DURING PREGNANCY\* \*\*

KENNETH W. SEWALL, M. D.

Hypertension frequently is a complication of pregnancy.

The types of hypertension found in pregnancy may be classified as follows:—<sup>1</sup>

1. Hypertensive disease; benign or essential, and malignant.
2. Renal disease;
  - a. Chronic vascular nephritis or nephrosclerosis.
  - b. Glomerular nephritis; acute or chronic.
3. Pre eclampsia; mild or severe. Eclampsia.
4. Unclassified toxemias.

Of these 83.6% have been found to have been caused by pre eclampsia and eclampsia, and 15.7% by hypertensive disease. The remaining 0.7% of hypertensive cases consist of the renal diseases.<sup>2</sup>

One of our difficulties often is in properly classifying the type of hypertension during pregnancy.

According to Savel<sup>3</sup> the differential diagnosis between *mild hypertensive* disease and *mild pre eclampsia* largely depends upon the time of onset. In the former this usually occurs before the 24th week of gestation and in the latter after the 24th week.

While pregnancy may light up renal pathology after the 24th week of gestation, if there is a persistence of these signs three or four months after the termination of pregnancy then the disease is not toxemia (pre eclampsia). However, hypertension may persist for many months after toxemia.

*Severe hypertensive disease* shows signs before 24 weeks of gestation while *severe pre eclampsia* manifests itself later. Also we have more pronounced edema, proteinuria and frequency of oliguria in severe pre eclampsia. Hypertensive disease with considerable proteinuria, not cardiac in origin, usually indicates some degree of renal failure and has lowered urea clearance.

In pre eclampsia the signs and symptoms disappear early in the puerperium.

*Nephrosclerosis or chronic vascular disease* occurs in, or before, 24 weeks of gestation. For the most part the findings are similar to those seen in hypertensive disease before the nephrosclerosis phase, but there are some which are definitely characteristic of

nephrosclerosis. Albuminuric retinitis is severe and more marked than in other conditions in pregnancy. The specific gravity of the urine is below 1020, often remaining low and fixed, and the urea clearance is low. Also there is a persistence of symptoms after the puerperium.

*Glomerulonephritis* has an acute onset, often febrile, and usually differentiated from other renal disease by transient hypertension and urinary findings of red blood cells and casts. It is rare during pregnancy. The chronic phase resembles pre eclampsia but the presence of red blood cells and casts in the urine, with lowered renal function and persistence of symptoms after the puerperium, is diagnostic.

*Nephrosis* is characterized by marked edema with little if any elevation in blood pressure, low serum protein and high blood cholesterol. The disease may occur early and persist, entirely unrelated to the pregnancy.

The aggravation, after the 24th week of gestation, of an existing hypertension, proteinuria and edema, in a disease not peculiar to pregnancy, must be construed to indicate the presence of superimposed pre eclampsia. Thus a "true toxemia" is often added to the existing renal condition of "pseudotoxemia." The return of values to pre-pregnancy levels during the puerperium, or shortly thereafter, corroborates such a diagnosis. Thus, the patient with uncomplicated essential hypertension whose blood pressure rises significantly (more than 20 mm.) and who also develops proteinuria and edema can be considered to have pre eclampsia superimposed upon the essential hypertension, especially if, in, or after, the puerperium, the edema and proteinuria disappear and leave only the hypertension of pregnancy level.

In *mild pre eclampsia* edema is slight or absent, the blood pressure is 140 to 160 systolic over 90 to 100 diastolic, and there are less than 6 grams per liter (2+) of proteinuria. Whereas in *severe pre eclampsia* the edema is moderate to severe, the blood pressure over 160 systolic and over 100 diastolic, and there are more than 6 grams per liter (3+ to 4+) of proteinuria. Also, in the mild degree the response to therapy usually is good, but in the severe form, in spite of treatment, the blood pressure often increases despite decreasing edema.

One may often be misled by the subjective complaints of the patient into considering her condition, mild pre eclampsia when, objectively, severe pre eclampsia exists. Also, a mild pre eclampsia may quickly change to eclampsia.

\* Read at Maine Medical Meeting, Poland Spring, June, 1948.

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The diagnosis of pre eclampsia should be based on the occurrence of two or three objective findings; hypertension of 140/90, edema and proteinuria (preferably when the patient is not in labor); but it may be made if elevation of blood pressure or proteinuria occur on two separate observations 24 hours apart. It is justifiable to make a diagnosis of severe pre eclampsia if on two separate observations, at least 24 hours apart, and not during labor, there is blood pressure over 160/100, more proteinuria than 6 gm. liter, or more than mild edema. However, the occurrence of only one of the signs of the severe type is not valid evidence for classifying a pre eclampsia as severe.

*Eclampsia* is a severe toxemia with convulsions. The diagnosis of the non-convulsive type, coma, is based on postmortem finding of eclamptic pathology following coma and death in a toxic pregnancy.

*Essential hypertension* is a disease in which there is an elevation of blood pressure without any signs or symptoms of renal disease. Dieckman<sup>4</sup> defines essential hypertension in pregnancy as a state in which a blood pressure of 140/90 or more exists for 2 days or longer. This degree of hypertension may be present before or during pregnancy and usually persists for 6 weeks or longer, post partum. While increased blood pressure may be the only sign noted, many complain of headache, unusual fatigue, dyspnoea on exertion, edema, nocturia, vertigo or tinnitus.<sup>7</sup> Laboratory tests usually are normal. The height of blood pressure is out of proportion to the edema and albumin when these are present. Renal function is normal. Eye grounds are normal or show a slight narrowing of the arterioles. Only in severe cases of hypertension do we get any impairment of renal function and marked eye changes.

Hypertension is not a valid reason for interrupting pregnancy unless there are marked eye ground changes or impaired cardiac or renal function.

Smithwick and Newell's paper<sup>5</sup> on pregnancy after sympathectomy, done for hypertension, showed that their patients did well throughout pregnancy, except for a higher incidence of toxemia than found in patients having no hypertension early in pregnancy.

Chesley<sup>6</sup> found, in a large series of patients with known hypertension before pregnancy or when first seen during the first 24 weeks of pregnancy, that the blood pressure frequently dropped during mid pregnancy. 40% of these cases showed a drop in blood pressure, 50% remained unchanged and 10% had an increase. The latter cases had a foetal mortality of 91%. The greatest foetal mortality occurred in cases having the highest initial blood pressure.

The appearance, in a case of essential hypertension, of either proteinuria, lowered renal function or superimposed toxemia is unfavorable to the prog-

nosis for the foetus. Maternal and foetal mortality, in essential hypertension, is greater when the latter is complicated by superimposed toxemia.

Mid pregnancy drop of blood pressure is of practical importance for another reason. The blood pressure may be normal when the patient is seen for the first time in mid pregnancy, though actually there may have been a hypertension in early pregnancy, and when there is a rise in blood pressure later in pregnancy, this may be thought to be due to toxemia rather than to the unknown preexisting essential hypertension.

The "*Unclassified toxemias*" are those cases which cannot be placed in the proper category during pregnancy. During puerperium, or with follow up study or necropsy, these cases will be found to fit into one of the other groups.

*Laboratory tests.* During pregnancy the best renal function tests have been found to be Fishberg's simple urine concentration test. If the specific gravity is below 1022 then a urea clearance test should be done using VanSlyke's manometric urease method.<sup>7</sup>

*Treatment.* The hypertensive patient routinely should have a 1800 calorie salt free diet with 85 grams protein, 75 grams fat and 200 grams carbohydrate.<sup>2</sup> If there is a rise in blood pressure, accompanied by a sudden increase in weight, sedation and enteric coated ammonium chloride tablets in 1½ to 6 gram doses daily should be ordered.

With toxemias, if the blood pressure remains over 140/90, the patient should have absolute bed rest in a hospital, with renal tests and the above therapy. Hypertonic glucose in distilled water, sedation and magnesium sulfate should be used in amounts commensurate with the severity of the toxemia.

"Veratrone" is being used in some clinics in the treatment of severe pre eclampsia and eclampsia. The following is the regime used at the Boston-Lying in-Hospital:<sup>8</sup>

- I. 5 minims "Veratrone" hypodermically on admission.
- II. Repeat at 20-minute intervals if necessary in 5-10 minum doses to keep the blood pressure below 150 systolic and pulse below 80, or if there is a convulsion.
- III. Magnesium sulfate, 50% solution intramuscularly 10-20 cc. every 4-6 hours.
- IV. Fluids.
  1. 250 cc. 25% glucose in buffered sterile water, intravenously slowly every 6 hours. If unconscious, every 4 hours.
  2. By mouth, if conscious, 2,000-2,500 cc. water in 24 hours.

*Continued on page 12*

## PROTEIN DEPLETION IN SURGERY\*

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Protein metabolism, properly maintained, has become an accepted factor in the overall clinical picture of the surgical patient, in recent years. The proper preoperative and postoperative control of deficiency states has proven to be a very real element in the morbidity and mortality of patients undergoing major surgical procedures. It is, possibly, true that most surgical patients require little special attention to nutrition, and that has been the premise in the past. It is now known that the previously unquestioned loss of weight of hospital patients is undesirable, and may be abbreviated. In other words, the postoperative asthenia, expected to a certain degree and accepted, in the past, may be ameliorated or entirely prevented by proper attention to nutrition. The beneficial effects of positive protein and vitamin balance, as well as fluid balance and other intricacies of ideal surgical care, are now accepted. Proteins appear to be the very essence of life, and the many functions they fulfill testify to their intricate natures. We shall concern ourselves, largely, with the effects of protein depletion on the surgical patient, in the preoperative and postoperative phases, and correction of these effects.

Protein deficiency of nutritional origin follows protein deprivation in the diet, and is aggravated by any condition producing increased loss of tissue protein. Under normal conditions protein can be utilized only after digestion when the large molecules are broken down to amino acids and combinations of amino acids, called peptides. After absorption into the blood stream, the products of digestion are carried to the body to manufacture tissue proteins, plasma proteins, hormones and enzymes, each of which has a characteristic amino acid composition. Normal protein nutrition can only be maintained by the assimilation of an appropriate mixture of amino acids, whether they originate from food protein or protein digests, supplied as such either by mouth or parenterally.

In the surgical patient, the mechanisms of production of hypoproteinemia are probably best classified as follows: (a) the patient with mechanical or functional barrier in the gastrointestinal tract; (b) the patient with digestive disturbance, such as severe diarrhea, which prevents proper assimilation of ingested protein; and (c) the patient with anorexia, which prevents adequate oral intake of protein.

The effects of protein deficiency have been well pointed out by Varco, Lund, Co Tui, Mulholland,

and many others. Varco<sup>2</sup> has shown that surgical manipulations are poorly tolerated in the deficient patient, as evidenced by instability of the blood pressure, protracted convalescence, and an increased incidence of complications. Lund<sup>3</sup> has had the same experience, observing remarkable reductions in complications when time is available for proper preoperative preparation. When conditions have not allowed effective preparation, preoperatively, immediate steps in the postoperative period have given good results, though less efficient than therapy given in the earlier phase. Mulholland and his co-workers<sup>4</sup> demonstrated the beneficial effects of maintaining a positive nitrogen balance very nicely. They observed eight cases of partial gastrectomy for treatment of duodenal ulcer, determined the nitrogen balance of each patient, and divided them into two groups. The first group received the routine postoperative treatment of infusions, transfusions, and gradually increased oral feedings. These patients exhibited a progressive loss of body weight, a cumulative negative nitrogen balance, and a suggestive fall of plasma proteins. The second group was given high nitrogen and high caloric feedings by means of nasal tube, and this group achieved an increasing positive nitrogen balance, a progressive rise of body weight, and of plasma proteins. In a further study of convalescence, Co Tui and Mulholland and associates<sup>5</sup> found that under classical ward regimen there was a constant nitrogen deficit, loss of weight and a prolonged stay in bed. This was also alleviated in a series of patients fed a high caloric and high amino acid mixture.

Among the complications incident to postoperative protein deficiency, probably poor wound healing and its incident difficulties such as stomal edema in surgery of the gastrointestinal tract, are most important. There is now general acceptance, among surgeons, that proteins affect the repair of tissues, both quantitatively and qualitatively. Clark<sup>6</sup> was probably the first to call attention to this fact and Ravdin<sup>7</sup> and others have shown that, without adequate amounts of essential amino acids, tissue growth cannot take place.

The basal requirement, as to protein, may be simply calculated in the normal as 1 gram per kilogram of body weight per day. There is good evidence that the basal metabolic rate may be rather markedly raised under certain conditions, such as severe burns, to as much as plus 50. For the average normal male weighing 150 pounds, about 70 grams of protein and 2500 calories would be an adequate day's intake. Processes of repair, however, require nutritional

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essentials above the normal allowance such that a diet of 135 to 175 grams of protein with caloric content of 3000 to 5000 is to be recommended. How best to attain this optimum? The means at hand are: (a) increased oral intake; (b) intratubal alimentation; and (c) intravenous therapy. The first method is felt to be best, when sufficient quantity of adequate quality can be obtained and ingested. In the debilitated and apathetic patient with starvation of some standing, the oral method is extremely difficult. Liquid dietary supplements fortified with protein concentrate and carbohydrate can be very satisfactorily administered, either orally or by tube. Skim milk powder is probably the best, the cheapest, and the most readily available protein concentrate. The proteins contained are complete and rich in liver-protecting amino acids, such as methionine. Varco<sup>8</sup> has postulated a supplement, with a simple and adequate formula, which in his experience is quite capable of producing the desired effects. It may be given as supplement to diet or may constitute the sole source of nutriment, as the mixture is palatable, and will pass readily through an indwelling nasal tube.

Varco' Formula

	CHO	P	F
6 whole eggs		36.0	36.0
2 egg whites		8.0	
4 oz. skim milk powder	58.8	40.4	1.2
300 grams lactose*	300.0		
1000 grams skim milk	50.0	36.0	
5 grains salt may be added when indicated			
	408.8	120.4	37.2

Calories 2446

Volume 1500 cc.

Caloric equivalent 1.63

May be flavored with chocolate, cocoa, vanilla, etc.

\* Sucrose may be substituted.

Whenever this liquid constitutes the sole source of nutriment the patient is urged to take about 5000 calories or a little over two liters per day. An advantage is that this mixture can be prepared in the hospital, but given at home, so sparing hospital expense and beds, during the period of preparation. Varco considers 5-7 days of dietary preparation to be necessary for each 10% of body weight lost. Under this scheme even severely malnourished patients can be prepared for surgery in two to three weeks. Diarrhea is a very occasional sporadic problem in the use of this mixture, but two measures should control this; (1) adequate refrigeration of entire supply except the patient's immediate needs; and (2) proper sterilization of equipment used in preparation. Adequate vitamin supplements must, of course, be given.

There are many excellent commercial preparations of protein hydrolysates, liver-protein digests, and amino acids available at the present time which may

be given parenterally and orally. These are probably particularly valuable in cases with impaired ability to digest protein, such as is sometimes associated with resection of a portion of pancreas, chronic pancreatitis, and occasional cases of mechanical rearrangement of the intestine with short circuits.

Intravenous therapy, insofar as protein is concerned, demands either: (1) whole blood; (2) plasma; or (3) protein hydrolysates, liver-protein mixtures, or amino acids. Many investigators are agreed that, in amino acid therapy, the oral route of administration is preferable to the intravenous, emergencies excepted. The reasoning behind this is that with the intravenous method of administration the substances are excreted too rapidly. Elman and others also point out that intravenous therapy with hydrolysates and amino acid mixtures may have harmful side reactions. A further point as brought up by Elman<sup>1</sup> is that, though patients could be maintained in positive nitrogen balance with these preparations, it is difficult to elevate plasma proteins, even though 2000-3000 cc. were administered per day. Allen, Bogardus, Egner and Phemister,<sup>11</sup> in considering administration of plasma and blood to the hypoproteinemic patient, concluded that whole blood was probably best because of the gain of oxygen-carrying cells and the possible utilization of hemoglobin to form tissue proteins. Plasma transfusions appeared to them to induce an anemia out of proportion to that which might be accounted for by plasma dilution, and they postulated that it might be due to blood volume changes. Their findings also suggested that less than 2500 cc. of plasma per 24 hours was not likely to elevate the plasma proteins. This amount is large as measured by current practices, but the amount of nitrogen given in this way was less than that advocated when protein hydrolysates were used. They consequently favored the administration of whole blood. A further suggestion is that the fear of overtransfusion is unwarranted, except in the presence of reduced cardiovascular reserve, and they emphasize the importance of great enlargement of facilities for obtaining blood and plasma, a point we, in Maine, could well remember.

Summary: A review of a few of the outstanding features of adequate protein nutrition in the surgical patient has been presented, in light of ascending importance in recent years. A method of high protein feeding, applicable to the small hospital is also reviewed. It is felt that greater emphasis may still be placed on this problem with advantage to each patient expectant of surgical treatment.

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### A Clinic for Hard of Hearing Children—Continued from page 2

be made readily available. While otological services may be obtainable in the larger urban centers, quite the reverse is true for the predominantly rural areas. This emphasizes the need for regional clinics to which these cases may be referred. Each clinic should provide a comprehensive service including both medical and rehabilitative therapy. Detection clinics are helpful in screening cases found defective in group testing, but practical results only come from a program which actually provides indicated treatment.

We have been conducting such a clinic at the Thayer Hospital, now, for almost two years. Although necessarily limited in its scope, it has already demonstrated two important things; its value in the number of children benefited, and that it can be done without undue financial burden.

Our clinic is carried on with the coöperation of the State Department of Health, under its Crippled Children's Program. The department furnishes the social service workers, maintains records, arranges appointments, and conducts the follow-ups. Cases are referred both by department workers and by school nurses. The department psychiatrist is available for consultation when needed. Cases are examined by otologists certified by the American Board, audiometric studies made, and indicated therapies recommended. Surgical procedures are arranged in the

clinic when indicated, and 50 mgm. of radium is available for naso-pharyngeal irradiation. Speech correction is carried out by the therapist in the department. Through the coöperation of the Department of Education, Division of Physically Handicapped Children, a weekly class in speech reading is held for those requiring it. To carry on this most important phase of the work, we are fortunate in having the services of Mrs. Dorothy Koons, formerly on the faculty of the Lexington School for the Deaf. We feel that we have all the necessary elements of a comprehensive program.

It should be possible to set up similar clinics elsewhere in the state wherever Board Certified Otologists are available. There should be no difficulty in obtaining their services on a purely volunteer basis. The State Department of Health stands ready to coöperate and the services of its workers would be available without cost to the hospital. If radium is not at hand, cases needing it can be referred elsewhere. Speech reading should not present too difficult a problem. There should be a number of competent teachers in the state whose services could be enlisted. One never knows how much can be accomplished until he tries, but one can be sure that a negativistic attitude only produces negative results. The future of many handicapped children is in our hands; let us not fail them.

### Hypertension During Pregnancy—Continued from page 9

In the nephritic and hypertensive patient the usual medical management, as for the non-pregnant, is carried out, with rest varying from slight restriction to absolute bed rest, depending on the severity of symptoms.

If the patient does not respond to medical treatment, and the pregnancy must be terminated, and the condition of the cervix is unfavorable for delivery from below; caesarian section, preferably under local anesthesia, is advised.

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EARLY PERTUSSIS IMMUNIZATION\*

A Review of Current Procedures

EDMUND N. ERVIN, M. D.

An editorial in the September issue of the *American Journal of Public Health*<sup>1</sup> presents the following figures showing that Pertussis has been less effectively controlled than any of the other acute communicable diseases of the United States.

	Deaths per 100,000		Per Cent
	1900	1940	Reduction
Diphtheria	40.3	1.1	98
Typhoid Fever	31.3	1.0	97
Measles	13.3	0.5	92
Whooping Cough	12.2	2.2	82
Scarlet Fever	9.6	0.5	95

It further states that during the three years 1943-1945 the combined death rate from diphtheria, scarlet fever, and typhoid fever was slightly less than that from whooping cough alone. This disease causes approximately 2,000 deaths a year in the United States.

Active immunization offers a means of control and becomes the definite responsibility of the private physician as well as the public health officer. Sixty-seven percent of all deaths occur in the first year of life. The severity and high mortality of whooping cough in the first year make early effective immunization desirable.

It has long been felt that immunization procedures before the age of six months were not practicable because of an inability to elaborate specific antibodies. Sauer<sup>2</sup> reported studies on the age factor and concluded that immunization should be undertaken after the seventh month because of the degree of failure to protect the infant prior to the third month as opposed to the seventh month. These observations may have been in part due to the methods of assay of the antibodies concerned or the type of vaccine used in the immunization of young infants. It may be that infants under six months require a more prolonged antigenic stimulus than do the older infants. Recent reports suggest that alum precipitated pertussis vaccine is more effective than the fluid vaccine by virtue of a more prolonged antigenic stimulus.

Sako<sup>3</sup> found that 75 per cent of infants below the age of six months developed agglutinins as a result of immunization with alum precipitated vaccine. In follow-up studies the incidence and severity of pertussis were much less than in a similar group of non-

immunized patients. In a more recent report Sako<sup>4</sup> administered three doses of alum precipitated vaccine (40 billion per cubic centimeter, Lilly) at monthly intervals to 8,690 Negro children from 2 weeks to 5 years of age. The infants below the age of 3 months developed agglutinins just as well as any age group. In other studies he was able to show that fluid vaccines were definitely inferior in agglutinin production to alum precipitated pertussis vaccine in the immunization of young infants. None of their patients who had a strong agglutination contracted pertussis, and the majority who acquired the disease in a mild form after immunization were those babies who failed to show any agglutination. The incidence and severity of pertussis was far greater among the non-immunized (89.7%) than the immunized (13.2%) group of infants under 3 months of age who developed agglutinin titers. Many children with low or negative agglutination titers escaped the disease after exposure which supports Miller's<sup>5</sup> observation that immunity may exist in the absence of agglutinins.

Adams et al<sup>6</sup> in a smaller series immunized infants with weekly and monthly inoculations. They concluded that with weekly inoculations, good antibody titers can be demonstrated in over half of the infants by the age of 1 month or 6 weeks. Monthly inoculations give a slower but more permanent rise.

Bell<sup>7</sup> using dosage schedules similar to those of Adams et al reports that the alum precipitated vaccine has been shown to be effective in young infants from 2-5 months of age.

Halpern and Halpern<sup>8</sup> immunized infants under 6 months of age in an attempt to confirm the studies of Sako and his associates. Their results, as judged by serologic and skin tests were similar in all respects.

The dosage schedule of Sako<sup>4</sup> offers the best chance of early protection of the infant. He recommends alum precipitated vaccine, standardized to contain 40 Billion organisms per cubic centimeter and given in doses of 0.2 c.c., 0.3 c.c., and 0.5 c.c., at monthly intervals to infants at one month of age. It is suggested that the vaccine be injected through a dry needle, deep subcutaneously or intramuscularly, and distally into the upper arm. Young infants tolerate the vaccine extremely well, local reactions occurred in only 8.6 per cent and systemic reactions in

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## SOME IMPORTANT CONSIDERATIONS IN THE MANAGEMENT OF FRACTURES OF THE FEMORAL NECK\*

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The management of intracapsular fractures of the femoral neck offers to the surgeon one of the most satisfactory methods of treatment of any fractures of long bones. Patients receiving such fractures are generally people in their sixth, seventh or eighth decade of life. For obvious reasons, the management of such a fracture in a patient over sixty years offers complications which the management in younger patients does not offer.

When one summarizes the methods of treating these fractures, one finds methods varying from the most conservative to the most radical. In many cases, the so-called radical treatment of these fractures is actually conservative. In my opinion, the treatment of a fracture of the femoral neck by conservative measures, namely by sandbagging or simple traction with the patient lying flat on his back for months on end is far from conservative. This question, therefore, brings up a decision, very important to the patient, whether or not conservative treatment shall be abandoned and more radical treatment instituted.

Treatment resolves itself into three categories. First, the most conservative, consists of sandbagging and little else. In combination with sandbagging, skin traction is applied, using weights of from five to ten or twelve pounds. The use of weights over eight pounds generally causes either the adhesive traction to pull from the skin or causes the formation of blebs beneath the adhesive. This can be as unsatisfactory and difficult to treat as the most complicated and extensive pressure sore.

The semi-conservative treatment resolves itself into femoral transfixion preferably with the Steinmann pin, the application of Bohler tongs, with or without a Thomas or a Braun-Bohler splint with weights from ten to fifteen or more pounds. The rationality behind this latter method is as follows: First, to reduce the shortening which is generally but not always present; and secondly, to maintain the reduction obtained by previous manipulation. Nothing has been said about the methods of reducing fractures of the femoral neck. The methods of Whitman and Leadbetter need no clarification. Accomplishing the latter adds to comfort to the patient. A malposition of fragments with the slightest movement causes pain, whereas an approximated position with identical movement generally causes none. It should also be kept in mind that these people, by necessity,

require a great deal of attention to the skin about the sacrum, about the heels and any other bony prominence. Older patients are prone to develop pressure sores very readily, sometimes with fatal results.

The third method of treatment is the method of internal fixation using the cannulated Smith-Petersen nail; or, a Moore-Blount nail which is a sharpened blade attached to a femoral plate with four to eight screw holes in the latter. A third method is the application of three or more so-called Moore-Telson pins. The latter, however, in spite of seeming simplicity, offer more complexity than does the insertion of the Smith-Petersen nail. The technics of these various procedures, will be discussed a little later on in this paper.

### *The Indications for Various Methods of Treatment Above-Mentioned*

To rush into the repair of a fracture of the femoral neck without due regard for the safety of the patient is hazardous, to say the least. There is no surgical emergency in the treatment of an intracapsular fracture of the femoral neck. All these patients should be hospitalized. They should be transported with a Thomas splint or other type of fixation splint so as to avoid surgical shock, and after admission be put to bed in an elevated position of the trunk. The first step in the good management of this type of fracture is a work-up from the medical standpoint by a competent internist. The orthopedist should not take the responsibility for the physical condition of this patient, but should call in an internist who studies the patient from the cardiovascular, genito-urinary and other systems. He determines the patient's ability to withstand surgery.

Simply because the patient is in the seventh or eighth decade of life does not mean necessarily that he cannot stand the semi-conservative or even the radical form of treatment. Granted that a patient's general condition is good, that his blood pressure is within reasonable limits, that there is no more than a reasonable amount of arteriosclerosis, that the kidney function is fairly good, that his urinary output, his ability to concentrate urine, etc., are reasonably good, there should be no contraindication to surgical treatment. If a patient's general condition is such that he can stand internal fixation of this fracture, it is poor judgement *not* to perform it. Of course each case is an individual problem and that which holds for one patient necessarily may not hold for another.

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After he has been hospitalized for a period of twenty-four to forty-eight hours, the internist determines the ability of the patient to withstand a relatively serious operative procedure. If the prognosis is poor and the patient unlikely to survive operation, surgical treatment is discarded in favor of the semi-conservative or the conservative methods. In substance, the decision to operate is not in the orthopedist's hands, but is in the hands of the internist, who is much better qualified to pass judgment on the general condition of the patient.

When one is confronted with pin fixation of one type or another, a knowledge of the anatomy relating to the simple lateral approach is essential. The vastus lateralis is encountered just beneath the trochanter laterally; directly below this the vastus intermedius, anteriorly. Posteriorly, one finds the insertion of the vastus lateralis. It seems quite unnecessary to dissect the muscles from the trochanter itself because the Smith-Peterson nail or other type of internal fixation is inserted well below the greater trochanter. The blood supply to this area is minimal and the region for the most part subcutaneous.

Ideally the surgical set-up of necessary equipment to perform this operation includes the usual dissection set, a Smith-Peterson hip-nailing set, sufficient nails of adequate length, an Engel-May or other type of guide, a drill and several Kirschner wires of adequate diameter.

My personal experience with an orthopedic table in the management of this fracture is limited. I have been accustomed to using an assistant whose sole function is to hold the limb, who does nothing else and who has no other responsibility. Competent assistants, nurses, and a qualified anesthetist are, of course essential.

#### *The Choice of the Operating Room Versus the X-ray Room*

Personally, I prefer to perform this procedure in the X-ray room because satisfactory lateral films are most difficult to obtain with a portable X-ray. At the outset it seems hazardous to subject the patient to any type of surgery in the X-ray room. One should take as many or more precautions in the X-ray room to prevent sepsis as one does in the operating room. One should insist on skin preparation, skin towels—preferably sutured—and more care in draping even than is routine in the operating room.

It is simple enough to get satisfactory antero-posterior views but extremely difficult to obtain satisfactory lateral films. It is extremely poor judgement to be satisfied with faulty X-rays or antero-posterior views alone. The success or failure of this method of treatment is directly dependent upon one's ability to see where the pin is going.

The Orthopedic Table often makes the Roent-

genography unduly complicated unless it has a self-contained X-ray unit. The greatest difficulty apparently comes with the management of the cassette. Another unsatisfactory complication which sometimes arises is the development of a pressure sore from the saddle. This is particularly so on lengthy operations where one has to wait repeatedly for development of films. The pelvic seat should be adequately and thoroughly padded if the orthopedic table is used. One of the most distressing complications which one encounters is the loss of the reduction which is incident to the raising and handling of the patient, incident to Roentgenography. I find operating in the X-ray room precludes most of these complications.

The technic which I have found most satisfactory from the standpoint of lateral films is to direct the central ray obliquely under the flexed hip of the opposite side. The cassette is placed adjacent to the trochanter of the fracture site in a position of 90 degrees to the X-ray tube. This arrangement avoids disturbance of the reduced fragments. Usually one to one and one-half hours are required to perform the nailing operation, depending upon the difficulty one has with X-rays, the convenience of the dark room, etc., although sometimes two or three hours are necessary in order to obtain satisfactory results.

#### *Choice of Anesthesia*

The choice of anesthesia is the problem of the anesthetist. Spinal anesthesia offers many advantages. Avertin anesthesia or light gas-oxygen anesthesia are both satisfactory and safe. Pentothal sodium, I think, has a much more limited application.

It seems quite unnecessary to dwell upon the technic of insertion of a Smith-Peterson nail. A few points, I think, might well be brought out. Skin towels, preferably sutured with silk, should be employed and a choice of varying length Smith-Peterson nails is obviously necessary.

While the Davidson, the Westcott, Hey-Groves and Engel-May guides are all satisfactory, my preference is for the last mentioned. To one acquainted with its proper use it offers almost mechanical exactness, although, of course, no directing apparatus is infallible.

It is wise to check the course and direction of the nail at least twice during its insertion. Films taken at one-third and two-thirds the depth of the insertion are indicated inasmuch as rotation of the proximal fragment frequently occurs from use of the mallet. Kirschner wire of adequate diameter should be used as this prevents bending with subsequent displacement of the nail.

No splint or plaster is necessary. A simple dressing is applied after adequate closure of the anatomic layers. A small basswood splint nailed to the sole

of a slipper or light shoe keeps the limb from rotating. It is difficult and painful in the immediate postoperative period for a patient to maintain a neutral position of the leg. Sandbags are helpful but proper application of a small basswood splint to the shoe makes the management of this very easy and very satisfactory.

It is wise to start motions as early as possible. Movements of the foot and knee should be begun the day following the operation and movement of the hip in several days or a week. Patients may be turned on the side and exercised actively in both flexion-extension of the knee and dorsiflexion-plantarflexion of the foot. I like to have these patients sit up the day following operation. Their metabolism is improved and there seems less likelihood of developing respiratory complications. Sometimes patients develop pneumonia on the fifth, or seventh or tenth day postoperative. This often reflects poor nursing care and nothing else. I feel that an operation that is done under good anesthesia in reasonably good time should not unduly traumatize even an elderly patient. It is important that these patients change their positions frequently, that they be not permitted to lie flat on their back but that they lie in a semi-sitting and sitting position, and that this position be changed routinely by the clock. As quickly as these patients can move the hip without pain, usually by the third, fourth or fifth day, they should be permitted to dangle. They should be permitted out of bed in a wheelchair as early as they can without pain. No weight-bearing, however, is permitted. After the wheelchair phase, these patients are allowed to ambulate with crutches. It is necessary to warn them against weight-bearing. A one or one and one-half inch lift on the sole and shoe of the good side is an aid in avoiding this. These patients must be under very careful observation for the first month to six weeks postoperatively. While many orthopedists allow weight-bearing within two to three weeks of operation, I feel this is dangerous, and that weight-bearing should not be permitted until there is X-ray evidence of union.

#### *Removal of the Nail*

There is no indication for removal of the nail unless there is X-ray evidence of absorption about the nail, or it becomes bent, broken or loose. It is not uncommon that even after twelve months, the removal of a nail may be followed by a re-fracture of the femoral neck, although union was supposed to have been present. Suffice it to say, that the presence of union together with a three-flange nail is more security to the hip than either of these alone.

#### *Some Comments on Other Methods of Internal Fixation*

The Moore-Telson or threaded pin is very satis-

factory in some cases. The drawback is that their insertion involves more or less guesswork, and that they require more dissection than is necessary with the use of a three-flange nail. On several occasions I have noted an inward progression of the nail, and in two cases it was necessary to remove one of the nails from the medial aspect of the thigh. The present Moore-Telson nails come equipped with a small nut on their distal extremity. The nails ideally should be placed one in each of the four quadrants of the femoral neck. They should not be placed completely parallel for obvious reasons.

While I have had no experience with the Henderson-Lag screw fixation, its one advantage seems to be its ability to impact the fragments mechanically. I do not believe that it is possible to use the Kirschner wire and the Engel-May guide as a preliminary step, and for this reason the insertion would be more or less guesswork.

The late complications resulting from internal fixation of fractures of the neck of the femur may be enumerated as: (a) loosening and extrusion of the nail; (b) fracture of the nail due to internal mechanical weakness; (c) absorption of cancellous bone about the nail; (d) infection; (e) avascular necrosis of the femoral head; and, (f) absorption of the neck. Perhaps the most distressing of all the above are avascular necrosis of the femoral head and absorption of the femoral neck. Avascular necrosis and absorption of the femoral neck can be ascribed to the destruction of the blood supply—either by the fracture itself, by unnecessary surgical exploration, by gross traumatic manipulation of the fragments, accompanied by arteriosclerosis or other vascular disease generally found in these elderly people.

The main blood supply to the neck is derived from branches of the femoral; namely the medial femoral circumflex, the ascending branch of the medial femoral circumflex artery, the ascending branch of the lateral circumflex artery and an additional branch of the same vessel which passes to the neck through the so-called "Y-ligament of Bigelow" (the ilio-femoral ligament). Several of the above-mentioned branches supply the capsule and it is obvious, therefore, that gross dissection of the capsule is sufficient to destroy the blood supply to the neck. The sole remaining vessel which supplies the femoral head comes through the vessels in the round ligament. It, therefore, is evident that the trochanteric region of the femur has an adequate blood supply but that the head and neck portions are directly dependent upon no more than three vessels—all of them small and all of these are related, with one exception, to the femoral neck. It is well to remember that the capsule is greatly traumatized in practically all fractures of the

*Continued on page 25*



## CLINICO-PATHOLOGICAL EXERCISE

## Case presented at the Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

This 62-year-old white male was admitted to the Medical service of this hospital January 11, 1948, with a chief complaint of weakness of 6 weeks' duration and jaundice of one day. He was relatively well until December 1, 1947, when he began having progressive weakness, anorexia, and intermittently light and dark-colored urine. He had no abdominal pain or distress, no nausea or vomiting, no hematemesis and his bowel movements remained normal; he had one bowel movement daily, and it was not bloody, dark, or clay-colored. He noted no ribbon character to his stools. He had no contact with chemicals, and had had no transfusions at any time. Despite the maintenance of good appetite, he had lost 17 pounds in five months prior to admission.

The patient took no medication for the past year except "cold tablets," one per week during the fall of 1947. He took only a small amount of alcohol, averaging one quart of whiskey every six months. He drank beer only in the summer, about one bottle per week. His weakness progressed to the point where he consulted his local medical doctor, who referred him into the hospital for observation.

Systemic review was significant in that he had occasional headaches; he had two small epistaxis about December 27, 1947, none since, and a "nervous breakdown" in the summer of 1946, from which he made an uneventful recovery in two months. Family history non-contributory. Past medical history: Scarlet fever as a child. He was jaundiced at 21 years of age; kept on working despite the jaundice, which subsided in two months. He consulted a physician, who said "he just had the jaundice." Hospitalizations: In 1940, he had a right herniorrhaphy, uneventful recovery.

Admission physical examination: Somewhat obese, moderately jaundiced, 62-year-old white male, appearing chronically ill. Temperature 98.6°; pulse 68; respirations 20; blood pressure 150/80. Skin moderately jaundiced; a few squamo-papules over the entire body, greatest density over the glutei; no telangiectases seen. Eyes: Sclerae deeply jaundiced. Ears, nose, throat: Right nares partially blocked; buccal mucosa yellow in color. Neck: Lymph nodes not palpable. Lungs clear and resonant. Heart: Apex beat felt in 5th interspace, 11 cm. to left of M.C.L. Low-pitched harsh systolic murmur, heard over entire precordium, loudest over apex, and aortic region, transmitted into neck. Abdomen soft; no

masses or tenderness; liver edge smooth; felt one fingerbreadth below costal margin. Spleen and kidneys not palpable. Extremities: Fingernail beds of good color; knee jerks hypoactive but equal; dorso-pedal arteries readily palpable. Rectal examination: No masses or tenderness; Grade II prostatic enlargement, without nodularity.

Laboratory: Admission Hb. 84%, 12.1 gms.; WBC. 5,150, with 54% neutrophils, 1% eosinophils, 3% basophils; 41% lymphocytes; 1% monocytes. Kahn and Hinton tests negative. Urinalysis: Clear; yellow; no bile; microscopic essentially normal. B.U.N. 11 mg.%; blood sugar 78 mg.%; Icterus Index 100. Total protein 5.84 gm.%; with albumin 3.08 gms.% and globulin 2.76 gms.%. Cephalin flocculation ++. Reticulocyte count less than 1%. Stool: Soft, yellow-brown; no occult blood; urobilinogen present. Van den Bergh immediate direct. Miniature film of chest negative. Plain plate of gall bladder showed "cluster of small shadows, which dropped to the area just above the right sacroiliac joint on standing, very suspicious of a cluster of gallstones." Barium enema: "Normal colon." Upper G.I. series: "Esophagus and stomach normal. Duodenal cap is directly posteriorly, and the duodenal loop over a 5 cm. area shows some narrowing, and in the upright position medial outline of the loop is smooth, suggesting a defect of the soft tissue mass. Third portion of the duodenum appears normal." Repeat upper G.I. examination on January 29, 1948: "Second portion of the duodenal loop shows definite abnormal changes, more distinct at this time, as compared with previous films, and I feel that these changes, represent definite pathology in this area." A third G.I. series revealed "Definite abnormality of the relationship of the first portion of the duodenum and the stomach; it may be due to adhesions, but I rather doubt if there is any actual lesion involving the second portion, either intrinsic or extrinsic." The latter interpretation was made by another roentgenologist.

Clinical course: Patient felt relatively well, throughout his hospitalization. He was placed on a high carbohydrate, high protein, low fat and high caloric diet. His appetite remained good, and he was restrained in bed with considerable difficulty, because, as he stated, he felt well. Temperature, pulse, and respirations were essentially normal throughout his hospitalization, though his temperature on four

different occasions reached respectively 99.6, 100.2, 100, and 100° on different days. Bromsulphthalein test: 28 % retention. Hippuric acid test: Excretion of benzoic acid 48.05%. Prothrombin time 82% of normal. Thymol turbidity 3.5 units. Alkaline phosphatase 2.0 units, with phosphorus 2.4 mg.%. His Icterus Index became progressively reduced, becoming successively 85, 75, and finally 50 on the 2nd of February. Serum bilirubin was 3.0 mg. direct and 2.0 mg. indirect. Six successive urinalyses revealed no bilirubin present, though urobilinogen was varying increased and normal. Highest titre present was dilution 1-40. Fecal urobilinogen was present on 3 different occasions. His total protein rose from 5.8 gm.% to 6.34 gm.%, and A-G ratio of the latter was 3.18 gm.% albumin and 3.16 gm.% globulin. RBC. remained essentially the same on repeated examination, namely, 3,500,000; however, his hemoglobin fell to 66%, being 85% on admission, and WBC. remained low, from 5,400 to 6,400.

The patient's jaundice decreased progressively, and various stools on the ward were brownish in color, though one was noted as being clay-colored. The patient was seen in surgical consultation on February 4, 1948, and it was noted that "Diagnosis of tumor of the head of the pancreas is not tenable at present; patient should be re-X-rayed at intervals. Studies should be carried out to classify the hemolytic icterus as to congenital or acquired, and surgery be postponed for the present, as we feel that evidence of an hemolytic icterus is present, more impressive than for an obstructive jaundice; eventually the patient should be operated upon, and the spleen removed, if this is a congenital hemolytic icterus."

On February 6, 1938, the patient being of Type A blood, was given 500 cc. of Type O blood, in order to determine the survival time of transfused red cells, according to the method of Ashby. Type O cells were then calculated and found to be 590,000 on February 6, 380,000 on February 20, and 160,000 on May 3.

The patient was readmitted on May 5, 1948, on private medical service. He complained of swollen abdomen and edema of three weeks' duration, and abdominal pain of 4 days' duration. His jaundice had recurred, and his feet had become quite edematous. He had no chills or fever, though his urine was dark and his stools of normal color. Physical examination was essentially the same as previously, except for fluid wave and 4+ pitting edema of the pretibial surfaces of the leg. His urine was dark-colored and showed the presence of 1+ bile. Total protein 5.18 gm.%, albumin 2.41 gm.%, globulin 2.77 gm.%; thymol turbidity 2.5 units. Bromsulphthalein retention 72%. B.U.N. 24 mg.%. Repeat urinalyses showed no urobilinogen. Icterus Index 75. Stool: Light brown; negative for occult blood.

Prothrombin time 89% of normal. EKG: "Sinus arrhythmia, low T waves in limb lead." 4100 cc. of yellow ascitic fluid were removed on May 8, and the patient felt improved. The fluid was xanthochromic, and 300 cc. were sent to the laboratory. Specific gravity was 1.007; total protein 500 mg.

The patient was discharged on May 15, on a low salt, high protein diet, choline, and menadione. He was treated by his local doctor at home, but his course was steadily downhill, and the ascites persisted. At 6 P. M. on May 25, he had severe substernal pain, lasting 5 minutes. He ceased breathing 10 minutes later, despite receiving 100 mg. of demerol. His body was brought to this hospital for post-mortem examination.

#### DISCUSSION

*Dr. Donald Daniels:* This 62-year-old male was admitted to the Medical service of this hospital January 11, 1948, with chief complaint of weakness of 6 weeks' duration and jaundice of one day. Patient stated that he was relatively well until December 1, 1947, which would be about six weeks previously, when he began having progressive weakness, anorexia, and intermittent dark-colored urine. He had no abdominal pain or distress, no nausea or vomiting, no hematemesis, and his bowel movements remained normal, so that we note he had weakness, anorexia, and jaundice; he had one bowel movement daily, and it was not bloody, dark, or clay-colored. He noted no ribbon character to his stools. He had no contact with chemicals in his job, and had had no transfusions at any time. Despite the maintenance of good appetite, he had lost 17 pounds in five months prior to admission, so now we have weight loss to add to the others. The patient took no medication for the past year, except "cold tablets," one per week during the Fall of 1947. He took only a small amount of alcohol, averaging one quart of whiskey every six months. He drank beer only in the summer, about one bottle per week. I think I am inclined to assume that alcoholic consumption is not of much importance in this case. I should take the history as fairly accurate here. His weakness progressed to the point where he consulted his local medical doctor, who referred him to the hospital for observation.

Systemic review was significant in that he had occasional headaches; he had two small epitases about December 27, 1947, none since, and a "nervous breakdown" in the summer of 1946, from which he made an uneventful recovery in two months. "Nervous breakdowns" can be most anything. I can only guess it was probably not just a matter of poor reaction to his environment, but does have some significance as a sign of organic disease. Family history non-contributory. Past medical history: Denied having measles, scarlet fever as a child. Diseases of



adulthood: Patient was jaundiced at 21 years of age: kept on working, despite the jaundice, which subsided in two months. He consulted a physician, who said "he just had the jaundice." Hospitalization: Maine General Hospital, 1940, right herniorrhaphy, uneventful recovery. So, thus far, we have weakness, jaundice, loss of weight, nosebleeds, and possibly some other general systemic disorder which was called a "nervous breakdown." We have this history of jaundice at age of 21, which would appear to have been catarrhal jaundice or infectious hepatitis. He worked right through it, and it healed in due time. It seems likely that this doesn't enter into our case now, since that would be an illness of some 40 odd years ago, and I doubt if he had liver damage that was serious at that time, without some further manifestation of it, aside from present illness. I am going to consider this as a past and closed episode.

Admission physical examination: Somewhat obese, moderately jaundiced 62-year-old white male, appearing chronically ill. Temperature 98.6°, pulse 68, respirations 20, blood pressure 150/80. Skin moderately jaundiced; a few squamo-papules over entire body, that is something of a puzzling statement; it might mean something of importance or an incidental finding. I am inclined to take it as an incidental finding. No telangiectases seen. Eyes: Sclerae deeply jaundiced. E.N.T.: Right nares partially blocked; buccal mucosa yellow in color. Neck: Lymph nodes not palpable. Lungs: Clear and resonant. Heart: Apex beat felt in 5th interspace, 11 cm. to left of M.C.L. This might appear to be a little enlarged, but seems to be not very important. Low-pitched harsh systolic murmur, heard over entire precordium, loudest over apex, and aortic region, transmitted into neck. Abdomen soft, no masses or tenderness, liver edge smooth, felt one fingerbreadth below costal margin. Spleen and kidneys not palpable, it is well to remember this. Extremities: Fingernail beds of good color; knee jerks hypoactive but equal; dorso-pedal arteries readily palpable. Rectal examination: No masses or tenderness; Grade II prostatic enlargement, without nodularity. So, physical examination doesn't give us very much more evidence than what was based on symptomatology: weakness, jaundice, and weight loss, to which we now add a slightly enlarged, smooth liver, and some cardiac signs, which may not be part of the basic disease.

Laboratory work: Admission Hb. 84%, 12.1 gms.; WBC. 5,150, with 54% neutrophils, 1% eosinophils, 3% basophils, 41% lymphocytes, 1% monocytes (fairly normal). Kahn and Hinton negative. Urinalysis: Clear; yellow; no bile; microscopic essentially normal. B.U.N. 11 mg.%; blood sugar 78 mg.%; Icterus Index 100 (which is moderately severe jaundice). Total protein 5.84 gm.%, with

albumin 3.08 gm.%, and globulin 2.76 gm.% (might be incorrect findings). Cephalin flocculation ++. This is the first laboratory finding of liver disease. Reticulocyte count less than 1% (important in considering hemolytic disease). Stool: Soft, yellow-brown; no occult blood; urobilinogen present (helpful to know there is no blood in the stool; urobilinogen present is sort of ambiguous, as it may be present normally). Van den Bergh positive, immediate direct — might be an obstructive type of jaundice. Miniature film of chest negative. Plain plate of gall bladder showed "cluster of small shadows, which dropped to the area just above the right sacroiliac on standing, very suspicious of a cluster of gallstones." Barium enema: "Normal colon." Upper G.I. series: "Esophagus and stomach normal. Duodenal cap is directly posteriorly, and the duodenal loop over a 5 cm. area shows some narrowing, and in the upright position medial outline of the loop is smooth, suggesting a defect of the soft tissue mass. Third portion of the duodenum appears normal." Repeat upper G. I. series on January 29, 1948: "Second portion of the duodenal loop shows definite abnormal changes, more distinct at this time, as compared with previous films, and I feel that these changes represent definite pathology in this area." A third G.I. series revealed "Definite abnormality of the relationship of the first portion of the duodenum and the stomach; it may be due to adhesions, but I rather doubt if there is any actual lesion involving the second portion, either intrinsic or extrinsic." The latter interpretation was made by a different roentgenologist from the one who made the first two observations on the G.I. series.

(Demonstration of films.)

*Dr. Jack Spencer* (roentgenologist): This is a film taken in upright position. Duodenal cap and second portion of duodenum here. The second portion of the duodenum from here to here is not completely filled with barium, and shows an apparent change in the calibre of the lumen. This was taken in A-P position, and we get the impression on this film. This taken in the upright position you get the impression of a small outline at this point. He was X-rayed 3 times; at all times the second portion of the duodenum did not fill as completely as we would like to see it. However, it failed to show a definite deformity. This film showed a loop here with a small outline characteristic of a defect at the second portion of the duodenum.

*Dr. Daniels*: Patient felt relatively well throughout his hospitalization. He was placed on a high carbohydrate, high protein, low fat and high caloric diet. His appetite remained good, and he was restrained in bed with considerable difficulty, because, as he stated, he felt well. Temperature, pulse, and respirations were essentially normal throughout his hos-

pitalization, though his temperature on four different occasions reached respectively 99.6, 100.2, 100, and 100° on different days (some proof of intermittent fever, although the occasions are rather few). He complained of no fever or chills at any time, and his course was followed with various liver function tests. Bromsulphthalein test, 28% retention which is abnormal. Tests done on a patient who is jaundiced are not fully accurate, but worth some consideration. Hippuric acid test: 48.05% of benzoic acid. I think that is somewhere about normal.

*Dr. Porter:* The patient is given about 6 grams of sodium benzoate, and the urine is collected for a four-hour period, during which he should excrete about 3 grams as benzoic acid. This patient only excreted about half that much, about 1½ grams of benzoic acid, showing that his liver was only able to form half as much as normal.

*Dr. Daniels:* Prothrombin time was 82% of normal. Thymol turbidity 3.5 units, not abnormal at this time. Alkaline phosphatase 2.0 units, with phosphorus 2.4 mg.%, this is generally a fairly reliable test for the presence of obstructive jaundice, but on that basis I will not say yet there is no obstruction of the common bile duct or extrahepatic ducts. His Icterus Index became progressively reduced, becoming successively 85, 75, and finally 50 on the second of February. Serum bilirubin was 3.0 mg. direct and 2.0 mg. indirect. That is rather definite elevation, as we would expect with jaundice, and may be somewhat important evidence if we try to prove hemolytic jaundice. Six successive urinalyses revealed no bilirubin present; a rather important negative finding, since one wants to know if bilirubin is present in urine when they want to explain it as hemolytic jaundice, though urobilinogen was varyingly increased and normal; highest titre was 1-40. Fecal urobilinogen was present on 3 different occasions. We just know it was present, i.e. no obstruction. His total protein rose from 5.8 gm.% to 6.34 gm.% and A-G ration of the latter was 3.18 gm.% albumin and 3.16 gm.% globulin. The RBC. remained essentially the same on repeated examinations, namely, 3,500,000, that, I think, is of considerable interest, since this is the first red count—to know that all through this period it had remained the same. However, his hemoglobin fell to 66%, being 85% on admission, and WBC. remained low, from 5,400 to 6,400.

The patient's jaundice decreased progressively, and various stools on the ward were brownish in color, though one was noted as being clay-colored. Here again we get the same impression that is present in one or two other places, that there is an intermittent character to the disturbance of the liver function. The patient was seen in surgical consultation on February 4, 1948, and it was noted that "Diagnosis of tumor of the head of the pancreas is not tenable at

present; patient should be X-rayed at intervals. Studies should be carried out to classify the hemolytic icterus as to congenital or acquired, and surgery be postponed for the present, as we feel that evidence of an hemolytic icterus is present, more impressive than for an obstructive jaundice; eventually the patient should be operated upon, and the spleen removed, if this is a congenital hemolytic icterus." Well, this is a very interesting and helpful statement, because it shows that at this time the diagnosis was still uncertain, and obstructive jaundice, presumably carcinoma of the head of the pancreas, is being considered, and yet the liver function tests and the blood tests presumably had caused a certain degree of belief that a hemolytic jaundice was present. We have had no report on the red cell fragility. Whether it was done or is being withheld, I don't know. It might be of help to us in considering the question of hemolytic jaundice.

*Dr. Max Witte:* Can you have a congenital jaundice at age of 60?

*Dr. Daniels:* I do not believe so, although congenital hemolytic icterus may make its first appearance in adult life, usually in the 20 to 30 decades; I doubt if such an explanation holds in this case. On February 6, 1948, the patient, being of Type A blood, was given 500 cc. of Type O blood, in order to determine the length of survival of viable transfused red cells according to this method of Ashby. Type O cells were then calculated and found to be 590,000 on February 6, 380,000 on February 20, and 160,000 on May 3. The only thing I can make out of this is that three months later he still had red cells of the type he was transfused with, and that this would seem to be somewhat against it being a hemolytic jaundice; I am not familiar enough with the test to say more than that.

The patient was readmitted on May 5, 1948, on private medical service. He complained of swollen abdomen and edema of 3 weeks' duration, and abdominal pain of 4 days' duration. His jaundice recurred, and his feet had become quite edematous. He had no chills or fever, though his urine was dark and his stools of normal color. Physical examination was essentially the same as previously, except for fluid wave and 4+ pitting edema of the pretibial surfaces of the leg. His urine was dark colored and showed the presence of 1+ bile. Total protein 5.18 gm.%, albumin 2.41 gm.%, globulin 2.77 gms.%. Here the ratio is reversed. Thymol turbidity 2.5 units. Bromsulphthalein retention 72%. B.U.N. 24 mg.%. Repeat urinalyses showed no urobilinogen. Icterus Index 75. Stool: Light brown; negative for occult blood. Prothrombin time 89% of normal. EKG "Sinus arrhythmia, low T waves in limb lead" (probably insignificant). 4,100 cc. of yellow ascitic fluid were removed on May 8, and the patient felt



improved. Laboratory examinations of the fluid revealed 18 RBC. and 20 lymphocytes; the fluid was xanthochromic, and 300 cc. were sent to the laboratory. Specific gravity was 1.007; total protein 500 mg., so that this fluid was a transudate, and would seem to be pretty much like usual ascitic fluid. The laboratory finding of xanthochromic color makes one think of hemorrhage within the fluid, but not much other evidence of it, as far as the blood count goes.

The patient was discharged May 15, on a low salt, high protein diet, choline and menadione. He was treated by his local doctor at home, but his course was steadily downhill, and the ascites persisted. At 6 P. M. on May 25, he had severe substernal pain, lasting 5 minutes. He ceased breathing 10 minutes later, despite receiving 100 mg. of demerol. His body was brought to this hospital for post mortem examination.

I think this man would have died had he not suffered the last complication, which almost seems to be some acute vascular accident, independent of his main disease, or at best, a complication of his main disease. This terminal attack seems to have been thrombosis or pulmonary embolus. I don't know which of the two it might be. Had that not happened, he still would have had, from the time of his second admission on May 5 to discharge, and during his course subsequently at home, what seemed to be progressive failure. We can further go back and recapitulate that he started to feel ill on December 1, 1947, and died of the same disease, I presume, the latter part of May, which would make a history of about six months' duration, of an illness characterized by weakness, loss of weight, jaundice, ascites, and edema. So it seems to me that he had a fatal disease at its inception, and one which marched on steadily until the end. When we pause to analyze the various laboratory findings we have a confusing array of reports, and so I can make no consistent picture. It seems to point to both hemolytic jaundice and a partial or intermittent obstructive jaundice, an opinion the Surgical Service arrived at in consultation, and which I think was pretty sound at that point. If we say hemolytic jaundice, we have a hard diagnosis to prove. Why had he had it, and how long? And as Dr. Witte says, it does seem to be a confusing picture. I don't think he has congenital jaundice, even though it can appear in adult life. Therefore, it must be acquired jaundice, and we have to find out why it has developed.

I can't find anything in the various tests that substantiates a diagnosis or gives me a decisive clue. Some of these liver function tests are suggestive of hemolytic jaundice, but those tests are often uncertain, hard to interpret, and I think that I prefer to avoid getting lost trying to figure them out, and

shall hold to the main events of the disease, its intermittent course, and finally death, for more dependable evidence. If he had obstructive jaundice, then we have to figure the various causes of obstruction, and I shall refer here to the X-ray reports. There is abnormality of the duodenal loop, whether first or second portions, isn't too important. Lines of division are rather arbitrary. Since there is some defect in the intestine at that point, and since that point is where the extrahepatic biliary system is, we have a pretty fair reason at least for considering that some obstructive type of jaundice (or lesion which would produce that) might be his main disease. What could that be and how can we determine that, in view of the evidence of intrahepatic damage such as the bromsulphthalein and cephalin flocculation tests have shown? Finally, we have to recall that he had ascites, which indicates some type of portal obstruction. If we go back to the possibility of obstructive jaundice, such a lesion would be carcinoma of the head of the pancreas, and carcinoma was considered, and such was not considered possible in the usual manner, since obstruction was intermittent, and there was bile in the intestine. Therefore, we can't go further on that. Could we postulate some other type of lesion in that vicinity, which did not cause obstruction of the common duct, and might at the same time invade the liver? One can get malignant tumors anywhere. They arise in the duodenum, but since there was no occult blood in the stools, we should be careful about saying there is a tumor of the intestines. Could it be a malignant tumor involving the gall bladder? I should think it probable, also it might not have caused any pressure on the common duct, and it might have invaded the liver by direct extension, and given us metastatic liver disease. Or could there be any other cause of his jaundice outside of the liver itself or the abdomen that might do it? Could his heart have anything to do with this? It would have to be, if so, a cardiac cirrhosis. We presume he had a cirrhosis, since the liver was not enlarged, was palpable, and he did have ascites, which could result from fibrosis of the liver and a long-standing process. I can't sustain that possibility as causing all the positive findings, nor a diagnosis involving the heart as related to this. I am not certain that I know what the diagnosis is. I think I shall have to make the best I can. I don't think it is hemolytic jaundice, and therefore shall eliminate congenital jaundice. I think there is a malignant disease involving the right upper quadrant, with metastatic involvement of the liver. As to the primary source of it, I can only guess two possibilities that seem to me fairly worthwhile, carcinoma of the gall bladder or primary carcinoma of the liver. Primary carcinoma of the liver is rather uncommon (although it does occur) and I can't see how it could cause an X-ray defect in the duodenal

loop, therefore I have to say carcinoma of the gall bladder, although I know that there is no direct evidence for it. Some lesion is present that has not given complete biliary obstruction, and yet has gone on to cause involvement of the liver, with ascites, and finally a downhill course, which would in time have caused his death.

*Dr. Daniel's Diagnosis:*

Carcinoma of gall bladder, with metastases to liver.

*Dr. George Maltby:* I saw him in December, 1946, and thought he had a brain tumor. He complained of temporal pain. Lumbar puncture was normal, right and left Horner's syndrome present all the time. Pain was localized in the left side of the face. A typical gasserian fossa metastatic lesion of his fifth nerve ganglion.

*Dr. Spencer:* That was two years before his death?

*Dr. Benjamin Zolov:* One should consider portal cirrhosis of the liver. He admits taking a quart every six months, and true alcoholics seldom admit the truth regarding alcoholic intake.

*Dr. Witte:* Would it have done any harm to have gone in and done an exploratory operation?

*Dr. James Parker:* I think I was responsible for the surgical consultation. I saw this fellow the second time he came in. I can remember everything that happened, but not the end result. I will say nothing. What about the acute episode? What about the incidence of acute pulmonary embolism independent of his liver disease?

*Dr. William Burrage:* He was having Vitamin K right to the end, in large doses. He had recurrent attacks of epigastric pain, which caused us to take the electrocardiogram.

*Dr. Porter:* One item was left out of the protocol. This was that two fragility tests were done, and that hemolysis began at .6 and was completed at .27%, and both came out the same. Normal control was .45. I thought that was a little misleading and wasn't correct, and therefore left it out.

#### *Anatomical Diagnosis:*

Portal cirrhosis of the liver.

*Dr. Porter:* This man died as a result of cirrhosis of the liver. He had a very small liver, weighing 1025 grams. It was nodular but not large, and was a greenish-brown color. There was fluid in all his cavities. The abdomen contained 855 cc. Both lungs were quite heavy, and the heart was enlarged weigh-

ing 400 grams. The gall bladder was distended and in it there were six stones. The common duct was patent throughout, and showed no evidence of obstruction. The stomach and intestines were examined, and the only abnormality seen was slight hypertrophy of the region of the lower end of the stomach, and thickening of the duodenal wall. We were unable to find anything to account for the abnormalities demonstrated in the X-rays by Dr. Spencer. We were concerned with the etiology of the cirrhosis. Our first impression and the original diagnosis was healed acute yellow atrophy. For two reasons I have come to change that diagnosis after examining the microscopic sections and literature and reconsidering the gross appearance of the liver.

First, I don't think he showed the coarse nodularity of healed yellow atrophy in which the liver has undergone extensive large scars, and foci of regeneration. The second reason is that if this was an original injury to the liver when he was 20 years old, one would think that he had at that time infectious hepatitis, as Dr. Daniels has mentioned. In going over Lucke's<sup>1</sup> cases of infectious hepatitis describing the pathology in 1944, those cases that died showed very extensive necrosis of liver tissue. This report was followed by a paper<sup>2</sup> in which he described 24 cases of infectious hepatitis which had died as a result of trauma. Three of them were examined within one month after their infection, and others varied from one to fourteen months. In none of these cases was there any evidence of residual liver damage, which led him to conclude that once a patient recovers he has no residual disease.

The similarity between portal cirrhosis and the so-called healed acute yellow atrophy has been previously mentioned. In 1943, Karsner<sup>3</sup> stressed the similarity between the two conditions.

There is another factor in this case which might account for his cirrhosis, that is, biliary disease. There is nothing in the liver that I can see to prove that this is an alcoholic type of cirrhosis if it is possible for the pathologist to make such a diagnosis. I have reference to the finding of alcoholic hyaline in the liver cells, which was not seen in this case.

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The responsibility for planning and providing adequate hospital facilities for the tuberculous is a public, not a private obligation. — A. W. Fiske (Ohio

State Representative), *Ohio Pub. Health*, Sept., 1948.



## THE PRESIDENT'S PAGE

Once more the legislative wheels in Washington are about to turn. And first on the list comes the question of social security, various pensions and proposals relative to the national health. In the past similar, but smaller, projects have been conceived but have aborted in the light of public or political opinion as true facts were presented.

This time the political situation seems to favor more drastic procedures of legislation. Unless the whole scheme is crushed by its own economic weight the chances for success seem brighter than ever before.

Therefore the need for better public enlightenment. Therefore the necessity for presenting real facts to the people of the nation.

At last the issue is brought squarely before each medical man in the country. No longer can it be said: "Let *them* do something." Now it is up to each of us. The assessment voted by the House of Delegates of the American Medical Association will make a composite fund with which to amalgamate the doctors as a group and allow dissemination of educational facts to the people as a whole.

The campaign will be directed on a national level. Its success, however, can be assured only if each and every member of the parent association and of the state and county groups meets the assessment promptly and then lends every effort to further the spread of knowledge to the individual taxpayers.

By concerted coöperation and action this latest threat to the continued progress of national health may again be aborted and the American people again be spared to enjoy the benefits of what has proved to date to be the best system of medical care in the world.

May each of our members remember his own individual responsibility in this present crisis.

FORREST B. AMES, M. D.,  
*President, Maine Medical Association.*

## EDITORIAL

## A. M. A. Plans Nationwide Health Education Program

Progress in American medicine is an achievement which we, as doctors, are proud to relate to the general public.

Yet, for some time now, many stories reaching lay readers have dealt with isolated cases of distress, indicating the medical profession, along with articles based on glib promises of social planners.

During the ensuing year, the medical profession must concentrate its efforts on one problem: to tell the American people about the many contributions which the medical profession has made to alleviate disease, preserve life and postpone death. Our story must stress the importance of our present system of voluntary care and present the true facts about medical care and health protection.

The House of Delegates of the American Medical Association, at the Interim Session in St. Louis, fully recognized these problems by creating a means for carrying on a nationwide health education program. To finance this program an assessment of \$25 was made on each member of the American Medical Association. Members of the American Medical Association do not pay dues. If they desire to become Fellows of the Scientific Assembly they make

application and pay \$12 a year dues, which include a subscription to *The Journal*. This hardly pays for the paper and printing; notwithstanding the fact that the doctor receives the best medical periodical published anywhere in the world.

In 1947, the expenses of the Association exceeded income. For that reason dues of Fellows were raised from \$8 to \$12. However, even higher costs have kept apace with this raise and the Association may show a net loss for 1948.

The medical profession as a whole is of the firm opinion that government control of medicine would lower the standards of medical care in the United States, and is so sincere in this belief that it feels everything possible should be done to prevent such control from being thrust upon us.

A coordinating committee has been formed to help solve many of the problems which we face, and it is enlisting the support of every physician. This committee is composed of Dr. E. L. Henderson, chairman, Dr. Edward S. Hamilton, Dr. Gunnar Gundersen, Dr. Walter B. Martin, Dr. Louis H. Bauer, Dr. John W. Cline, Dr. William Bates, Dr. R. B. Robins, Dr. R. L. Sensenich, and Dr. George F. Lull.

H. D. Ross, M. D.

28 Winter Street, Sanford, Maine

December 30, 1948.

W. Mayo Payson, Executive Secretary,  
Maine Medical Association,  
Portland, Maine.

*Dear Mr. Payson:*

In your recent letter it is not stated where to send the \$25.00 assessment, so I am forwarding it to you and am asking you to see to it that it arrives where it should go. It is something that certainly merits all our support and believe the men will be prompt.

Most sincerely yours,

/s/ H. D. Ross, M. D.

*Some Important Considerations in the Management of Fractures of the Femoral Neck—Continued from page 16*

femoral neck and that that in itself predisposes an impaired blood supply to the neck.

It has been said that bad results are the result directly of poor nailing. This is not necessarily so. Frequently, it has been found that after reduction and secure nailing of these fragments, aseptic necrosis or non-union of the fracture line develops. This is more often due to the faulty anatomic distribution of the blood supply to the neck, and, in my opinion, has little bearing upon the nailing operation itself.

It has been brought out previously in this discussion how complete dissection of the hip joint was unnecessary in application of the Smith-Peterson nail. Since unnecessary dissection or retraction or trauma to the joint capsule may destroy the blood vessels of the femoral head and cause necrosis, these, therefore, should be avoided. It would appear that the simple lateral approach above-described would answer most of the requirements in the surgical management of fractures of the femoral neck.

*Early Pertussis Immunization—Continued from page 13*

7.1 per cent. Abscesses occurred in 0.6 per cent. Systemic reactions were more common following the second and third injections. The fluid vaccine is usually associated with more febrile reactions. Induration at the site of injection may persist for 4-5 weeks. Abscess formation may be avoided by use of a dry needle and deep subcutaneous or intramuscular injection. When abscesses do occur they should be treated conservatively. Both systemic reactions and abscess formation were associated with high agglutinin titers.

Wu and Chu<sup>9</sup> were the first to give a stimulating or booster dose of pertussis vaccine to previously immunized children. They found that such an injection was followed by a marked increase in agglutination within a week far above the immediate response to the initial inoculation. Sako<sup>4</sup> recommends that 0.5 c.c. of alum precipitated vaccine be given as a stimulating dose approximately 8-12 months after the last inoculation. He showed that one month after re-inoculation the agglutinin titers rose markedly in the vast majority of cases. The higher level of agglutinin titer is maintained for two years or longer.

## COMMENT

It appears that infants under the age of six months are able to develop antibodies against pertussis with alum precipitated vaccine. Although the incidence of pertussis is greater in those immunized under six months than in the older group, the disease is milder in the former as opposed to unvaccinated infants.

The fact that the older infant is able to respond to immunization better than the infant under six months is a poor excuse for withholding protection during the earlier age period. Although infants under six months of age do show significant antibody titers with injections at weekly intervals, more significant titers are obtained with injections at monthly intervals. The latter procedure is probably advisable in private practice where the infant can be protected from exposure by a controlled environment.

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***Your Membership Expired December 31st***

***Pay Your 1949 State and County Dues Promptly  
to your County Secretary***





Edward Leo Herlihy, M. D.  
1895 - 1948



## NECROLOGIES

### Edward Leo Herlihy, M. D.

The State of Maine and the City of Bangor in particular suffered a severe loss on November 1, 1948, in the death of Dr. Edward Leo Herlihy, 53, senior surgeon at the Eastern Maine General Hospital. Dr. Herlihy died suddenly at the South Gorham home of Dr. Eugene H. Drake, a college roommate, whom Dr. Herlihy was visiting while attending the annual convention of the Maine Medical Association at Portland. He was a council member of this association.

Born in Bangor, son of John C. and Ellen (Connor) Herlihy, Dr. Herlihy was graduated from Bangor High School and attended the University of Maine, transferring from there to Bowdoin Medical School, from which he received his degree in 1920. He interned at the Eastern Maine General Hospital and was appointed to the surgical staff in 1922. He served as president of that hospital staff from 1946 to 1947.

Dr. Herlihy gave untiring effort to his profession and at the same time worked endlessly for the betterment of the community. The project nearest to his heart was the establishment of a medical school in connection with the University of Maine, and to this project he gave a great deal of time, traveling over the State and speaking to various groups, informing them of the need of such a school if Maine is to hold young men within the State and medical profession. He did a great deal of research on the subject and visited various medical centers in the interests of gaining all information possible to bring to fruition a Maine medical school. At the time of his death, he was chairman of a committee named by

former Governor Horace A. Hildreth to study the need for such a school.

An outstanding example of Dr. Herlihy's devotion to his profession and to his patients was demonstrated in 1947, when, on October 24, his only son, Edward L. Herlihy, Jr., was killed in an automobile accident. After a brief period taken to recuperate from his deep sorrow, he took up his work again, plunging into a heavy schedule of surgical and medical duties—giving service to others without thought of himself.

His charities were many and no worthwhile cause went forward without his aid, and many a family needing medical or surgical attention and not having funds, was cared for by Dr. Herlihy.

Dr. Herlihy was a member of the American Medical Association, the Maine Medical Association, the American College of Surgeons and the Penobscot County Medical Association of which he was a past president. He was physician for the Bangor Home for Aged Men, a surgeon on the board of the Bangor Anti-Tuberculosis Association and a member of the committee for the Jackson Memorial Laboratory. He was also a member of the advisory committee for Bangor's Chronic Disease Hospital, and was a surgical consultant at the Bangor State Hospital. He was a member of the Bangor Rotary Club, the Penobscot Valley Country Club and the Bangor Executives Club.

He is survived by his wife, Mrs. Madeline Robinson Herlihy; a daughter, Mary Ellen; a sister, Mrs. Thomas N. Curran; and a brother, James; all of Bangor.



**George H. Coombs, M. D.**

**1863 - 1948**

George H. Coombs, M. D., 85, of Waldoboro, widely-known physician and a member of the Maine State Bureau of Health for several years, died November 20, 1948, at the Miles Memorial Hospital, Damariscotta, following an illness of a few days.

Doctor Coombs was born at Brunswick, January 7, 1863, the son of David E. and Annie M. Lee Coombs. He was graduated with honors from the University of New York Medical School in 1886. He interned at Bellevue Hospital, New York, for two years, and began his medical practice in Brunswick in the fall of 1888. In 1890, he took a post-graduate course at the University of New York, following which he went to Toledo, Ohio, to practice. While in Toledo he contracted malaria and returned to Maine in 1891 to convalesce.

From 1891 to 1920, he practiced in Waldoboro, doing all types of emergency surgery which included about everything from appendectomies to major amputations, in addition to his general practice. Much of his practice was on the islands off Maine. As a country doctor he traveled on foot, by snowshoes, horse and buggy, motor boat and automobile.

In 1920, he was appointed Director of Social Hygiene and Epidemiology for the State of Maine Department of Health. He held this position until 1928 when he returned to Waldoboro for two years. In 1930, he was appointed Director of the State of Maine Bureau of Health, a position he held until 1939 when he resigned and returned to general practice in Waldoboro.

He was a member of the American Medical Association, an Honorary Member of the Knox County Medical Society and the Maine Medical Association, a member of the Alumni Association of Bellevue Hospital Interns, and an Honorary Member of the State and Provincial Health Officers of the United States.

In 1936, he was presented with the Maine Medical Association's Fifty-Year Service Medal, and in 1946 with a ten-year service bar, indicating sixty years of medical service.

He was Vice President of the Maine Medical Association in 1917, and President in 1918. When the Association was re-organized to become a part of the American Medical Association he was elected to the first Council, as Councilor for the Third District, a position he held for six years. He also served on the Legislative Committee of the Association, and was a Past President of the Knox County Medical Society.

He was a member of the Blue Lodge Masons and of the Knights of Pythias. He received the Fifty-Year Grand Lodge of Maine, A. F. & M. Veterans' Medal in 1947.

In 1945, he was honored by Congress with a certificate of merit and selective service medal.

Doctor Coombs was twice married. His first wife, Gertrude F. Millett, died in 1928. Later he married Elizabeth E. Fossett of Waldoboro. Surviving are his widow; a daughter by his first marriage, Mrs. Parker B. Stinson, Augusta; a sister, Miss Jeannette Coombs, of West Bowdoin, and two nieces.





**David E. Dolloff, M. D.**

**1878 - 1948**

Only once in a lifetime are we privileged to know such a man as was David E. Dolloff.

The mold of this unique individual has been destroyed, and no other personality of such distinction may be reproduced to take his place.

David Ernest Dolloff was a native of Monroe, Maine, the son of Horace and Abigail Twombly Dolloff. There he received his early education. Graduating from the Eastern State Normal School, he attended Bowdoin Medical School, receiving his M. D. degree in 1907. Following an internship at the Salem Hospital in Salem, Mass., he entered upon the practice of medicine in Biddeford, Maine, in 1908, serving this community with complete devotion for 40 years.

In World War I he was a member of the U. S. Army Medical Corps, serving the larger part of the time in England and France. In World War II he was chief medical examiner of the Biddeford Selective Service Draft Board, and a leader of Civilian Defense.

He was a former member of the Board of Police Commissioners, and was at one time Park Commissioner of the City of Biddeford. During this term of office he established Clifford Park, the first children's playground in that city.

He was very active in local Red Cross and Public Health Nursing Services, and was chairman of the War Memorial Committee.

For over 25 years he was plant surgeon for the Saco-Lowell, and Pepperell Mills, as well as Chief-of-Staff of the Webber Hospital.

He was a member of the Dunlap Lodge, F. & A. M.; York Chapter, Bradford Commandery, Knights Templars, Adah Chapter, O. E. S. No. 1, Laconia Lodge, and of the York County, Maine Medical, American Medical Associations, and the American College of Surgeons.

He is survived by his widow, Carrie Rand Dolloff, whom he married in 1906, his mother, Abigail Dolloff, a son, Nor-

man Dolloff of Los Gatos, California, a daughter, Mrs. Wesleen Troy, of West Barrington, R. I., four grandchildren, and a brother, Melroy Dolloff.

The pattern of greatness should not be measured by national nor international fame. Greatness is in the spirit of the individual, in his daily reactions to life, and in his relationships with his fellow men. And to this pattern David Dolloff measured as few men have. His greatness lay in his skill, his judgment, his kindness, his humor, his great honesty of thought and deed, but most of all in his humanness and humility.

Whatever he believed in, he believed in with his whole heart and soul, and he would battle for his belief without rancor, but with an indomitable zeal and steadfastness of purpose.

Though he might thoroughly disagree, he maintained the utmost respect for other men's opinions and their right to uphold them.

And with these characteristics went a rare humor, a humor often biting, but tempered with justice—a humor just as often as not aimed at his own vagaries—a humor overlaid with a kindness one does not forget.

The many brilliantly cut facets of his character reflected not only his devotion to the profession of medicine, but also to the leading activities of the civil life of his community.

David Dolloff was a great man, a kind man, a good man—and one might well believe that Browning had him in mind when he wrote:

"One who never turned his back but marched breast forward,  
Never doubted clouds would break,  
Never dreamed, though right were worsted, wrong would triumph,  
Held we fall to rise, are baffled to fight better;  
Sleep to wake."

HENRY W. LAMB, M. D.



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## COUNTY SOCIETY NOTES

### Cumberland

The annual meeting of the Cumberland County Medical Society was called to order by Dr. Harold J. Everett at the Lafayette Hotel, Portland, on December 20, 1948, at 8.30 P. M. The minutes of the last meeting were read and approved.

A letter from the Western Maine District of the Maine State Nurses' Association was read, in which the names of three physicians to serve on the Board of Directors was requested. One of these names will be selected by the Nursing Association to serve on the Board for a three-year period. It was voted that the president appoint three physicians from the society as requested.

The following physicians were unanimously elected to membership: Drs. Ronald A. Bettie, Emerson H. Drake, Harris B. Haskell, John R. Lincoln, and Howard M. Sapiro, all of Portland; Lloyd G. Davies of Fryeburg; and Daniel F. Hanley of Brunswick.

Dr. James Patterson briefly discussed the needs for a hospital for chronic diseases in the Cumberland County area. Following a similar discussion about a year ago, Dr. Patterson was appointed Chairman of a committee to investigate the needs for such a hospital and discuss it with various hospital executives. Following this his committee recommended that this information be forwarded to the Cumberland County Commissioners. This was done by the secretary but no word has been received from them. It was the vote of the society that this matter be referred to the Legislative Committee.

The following officers were elected for the coming year:

President, Charles H. Gordon, M. D., Portland.

Vice President, C. Earle Richardson, M. D., Brunswick.

Secretary-Treasurer, Ralf S. Martin, M. D., Portland.

Delegates to the Maine Medical Association: (Two years), Drs. Harold J. Everett, Portland; Ervin A. Center, Steep Falls; George I. Geer, Jr., Portland; Carl E. Dunham, Portland; and James M. Parker, Portland. (One year), Drs. Frank A. Smith, Westbrook; Francis M. Dooley, Portland; and Franklin F. Ferguson, Portland. Alternates: Drs. Charles R. Geer, Portland; George L. Maltby, Portland; John M. Bischoffberger, Naples; Maurice J. Dionne, Brunswick; and Donald G. Wight, South Portland.

Legislative Committee: Drs. Franklin A. Ferguson and Luther A. Brown.

Public Relations Committee: Drs. Frederick R. Carter and Adam P. Leighton.

Executive Committee: Drs. Joseph E. Porter, Elton R. Blaisdell and Edward A. Greco.

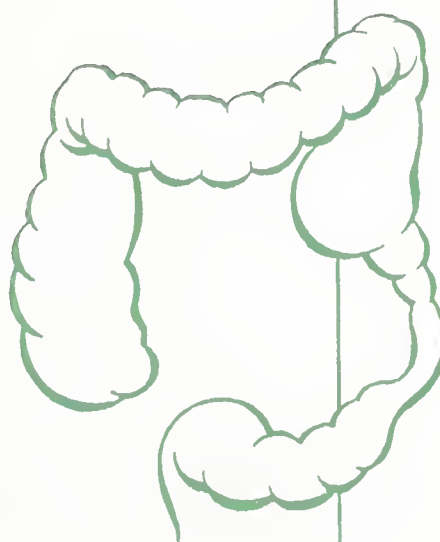
Dr. Thomas A. Foster, Delegate to the American Medical Association, spoke briefly on the reasons for the recent assessment of the medical profession by the American Medical Association. He emphasized that this money is not to be used for lobbying, but it is planned to spend it for educational purposes, principally the instruction of the public to the dangers of bureaucratic medicine.

The paper of the evening was given by George A. Potter, Assistant Vice President of the Liberty Mutual Insurance Company of Boston. He commented on the need for unified attack by the medical profession on compulsory insurance plans as proposed by the Federal government. He feels that the general public is not aware of the fine work that the medical profession has done in the past, and is not cognizant of the potential dangers of federalized control of medical practice. He announced the proposals of the insurance companies for the simplification of the working arrangements of the casualty companies with the physician. He recommended better selection of physicians, increased compensation to physicians for expert testimony, and increasing the per diem

*Continued on page 32*

# Bowel Management of the Irritable Colon . . .

"As an aid in reestablishing a normal rhythm, the temporary use of a bland bulk-producer . . . may be beneficial. . . Patients having irritable colon who believe they are suffering from constipation commonly use high-residue diets, . . . They may not realize that this practice is similar to using irritating cathartics or large enemas and often increases the tendency to constipation by increasing spasm of the colon."\*



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**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

\*Collins, E. N.: The Diagnosis and Treatment of Irritable Colon: Physiologic, Local, Irritative and Psychosomatic Factors, M. Clin. North America 32:398 (March) 1948.

*County Society Notes—Continued from page 30*

payment to hospitals for the cost of medical care. The paper was then discussed by Dr. Thomas A. Martin.

JOSEPH E. PORTER, M. D.,  
*Secretary.*

**Hancock**

Dr. M. A. Torrey presided at the annual meeting of the Hancock County Medical Society, held December 8, 1948.

The minutes of the previous meeting were read and approved. Drs. Lyman C. Burgess and Samuel Wagner were elected to membership.

The following officers were elected for the coming year:

President, James H. Crowe, M. D., Ellsworth.

Vice President, Herbert T. Wilbur, M. D., Southwest Harbor.

Secretary-Treasurer, Charles H. Knickerbocker, M. D., Bar Harbor.

Delegate to the Maine Medical Association: James H. Crowe, M. D. Alternate, Philip L. Gray, M. D., South Brooksville.

Censors: Drs. L. C. Burgess (3 years), P. L. Gray (2 years), Dwight Cameron (1 year).

The treasurer's report for 1948 was read and approved.

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

**Kennebec**

The annual meeting of the Kennebec County Medical Association was held at the Augusta State Hospital, Augusta, December 2, 1948.

The meeting began at 5.00 P. M. with a very interesting demonstration of narco-analysis by the hospital staff.

At the business meeting the minutes of the previous meeting were read and approved. The annual report of the Secretary-Treasurer was presented and accepted. Richard H. Dannis, M. D., of Waterville, was elected to membership.

The following officers were elected for the coming year:

President, Harold E. Small, M. D., Augusta.

Vice President, Allan C. Hurd, M. D., Gardiner.

Secretary-Treasurer, Arch H. Morrell, M. D., Augusta.

Council: Napoleon Bisson, M. D. (1949), Francis H. Sleeper, M. D. (1950), M. Tieche Shelton, M. D. (1951).

Delegates to the Maine Medical Association (1949): Drs. Theodore E. Hardy, Waterville; Leon D. Herring, Winthrop; Frank B. Bull, Gardiner; William L. Gousse, Fairfield; and Arch H. Morrell, Augusta. Alternates (1949): Drs. Kurt A. Sommerfeld, Gardiner; Kenneth W. Sewall, Waterville; Norman B. Murphy, Augusta; Aaron Cook, Waterville; and John F. Reynolds, Waterville.

The speaker was Dr. Francis H. Sleeper, Superintendent of the Hospital, who outlined the present needs of the institution. He said, in part, that Maine has not provided proper care for the mentally ill; this institution has 1500 patients cared for by only 5 doctors, ten trained nurses, and 165 attendants. Cardiac, pulmonary, dental, and surgical cases need attention. Mental patients are the only ones who don't have a say as to the hospital or care they need. 47% of the patients are over 60. There is much out-patient work to be done. Appropriations have hardly kept up with food and fuel, to say nothing of added care. These are all weaknesses. There have been improvements in various departments i.e. recreation, rehabilitation.

He appealed to the medical profession and an interested citizenry to give Maine what it needs for the mentally ill.

Dr. Frederick R. Carter felt that the needs were apparent and appealed to the doctors for their support.

A. H. MORRELL, M. D.,  
*Secretary.*

**Knox**

The annual meeting of the Knox County Medical Society was held December 14, 1948, at the home of Dr. Howard Apollonio, Rockport, Maine. There were twelve members and two guests present.

The following officers were elected for the coming year:

President, Frederick C. Dennison, M. D., Thomaston.

Vice President, Gilmore W. Soule, M. D., Rockland.

Secretary-Treasurer, Frank W. Kibbe, M. D., Rockland.

Delegates to the Maine Medical Association: Paul A. Millington, M. D., Camden; and Freeman F. Brown, Sr., M. D., Rockland.

FREEMAN F. BROWN, JR., M. D.,  
*Secretary.*

**Lincoln - Sagadahoc**

A meeting of the Lincoln-Sagadahoc Medical Society was held Wednesday, December 15, 1948, at the Sedgwick Hotel, Bath, Maine.

There were 15 M. D.'s and 8 dentists present. This meeting was held for the purpose of organizing a county dental society to work with the county medical society to effect means and measures of combating socialized medicine.

Martyn A. Vickers, M. D., of Bangor, was the guest speaker. He gave a nice talk on how socialized medicine started in New Zealand, England and France, and to the detriment of all concerned, in time.

NEIL L. PARSONS, M. D.,  
*Secretary.*

**New Members****Cumberland**

(Admitted December 20, 1948)

Ronald A. Bettle, M. D., 22 Arsenal Street, Portland.

Lloyd G. Davies, M. D., Fryeburg.

Emerson H. Drake, M. D., 29 Deering Street, Portland  
(By transfer from the Massachusetts Medical Society).

Daniel F. Hanley, M. D., Brunswick.

Harris B. Haskell, M. D., 9 Bramhall Street, Portland  
(By transfer from the Massachusetts Medical Society).

John R. Lincoln, M. D., 22 Arsenal Street, Portland.

Howard M. Sapiro, M. D., 175 State Street, Portland.

**Hancock**

(Admitted December 8, 1948)

Lyman C. Burgess, M. D., Blue Hill.

Samuel Wagner, M. D., Bucksport.

**Kennebec**

(Admitted December 2, 1948)

Richard H. Dannis, M. D., Waterville.



## NEWS AND NOTES

## Central Maine Postgraduate Clinics

CENTRAL MAINE GENERAL HOSPITAL, LEWISTON, MAINE  
Clinics held semi-monthly on Wednesdays. Open to the Profession.

## Advisory Committee:

Reginald Fitz, M. D., Chairman, Assistant Dean, Harvard Medical School.

James M. Faulkner, M. D., Dean, Boston University Medical School.

Dwight O'Hara, M. D., Dean, Tufts Medical School.

Samuel Proger, M. D., Professor of Medicine, Tufts Medical School.

## Clinic Committee:

E. C. Higgins, M. D., Chairman.

Samuel Stewart.

Julius Gottlieb, M. D.

Roy Allen, M. D., Secretary.

## PROGRAM

3:00 to 3:30—Collation.

3:30 to 5:30—Case Presentations and Dissertation on Recent Advances in Medicine and Surgery.

January 26, 1949 — Siegfried Josef Thannhauser, M. D., Ph. D., Professor of Clinical Medicine, Tufts College Medical School; Associate Chief, Joseph H. Pratt Diagnostic Hospital. Subject: Hyperparathyroidism.

February 9, 1949 — Samuel N. Vose, M. D., Professor of Urology, Boston University School of Medicine; Surgeon-in-Chief of Genitourinary Department, Massachusetts Memorial Hospital. Subject: Management of Urinary Tract Infections.

February 23, 1949 — Joseph Tartakoff, M. D., Assistant Professor of Surgery, Tufts College Medical School; Instructor in Anatomy, Tufts College Medical School. Subject: Surgical Emergencies of the Abdomen.

Preliminary Program  
ofNational Conference on Medical Service  
Palmer House, Chicago, Illinois, February 6, 1949

9:00 a.m. Registration; Foyer of Red Lacquer Room, Fourth Floor, Palmer House.

9:30 a.m. Call to order:  
Appointment of Committees.  
Address of the President — E. F. Sladek, M. D., Traverse City, Michigan.

9:45 a.m. Legalized Medical Research:  
Medical Problems — Chris J. D. Zarafonitis, M. D., University of Michigan.  
Legal Problems — George Wakerlin, M. D., University of Illinois.

10:25 a.m. Title to be announced—James R. McVay, M. D., Kansas City, Missouri; Chairman, Council on Medical Service, A. M. A.

10:50 a.m. Progress of the World Health Organization — Frank Calderone, M. D., Director, American Office, World Health Organization.

11:05 a.m. Progress of the World Medical Association — Creighton Barker, M. D., Executive Secretary, Connecticut State Medical Association.

11:20 a.m. Medical Program of the United Mine Workers of America, Welfare and Retirement Fund — Warren F. Draper, M. D., Executive Medical Director.

11:40 a.m. Discussion Period.

12:15 p.m. Subscription Luncheon.

1:00 p.m. The A. M. A. puts on its Fighting Togs. Speaker to be announced.

2:00 p.m. What's Happening in Washington This Week — James D. Boyle, United Public Health League.

2:30 p.m. Discussion. To be opened by Joseph S. Lawrence, M. D., Director of the Washington Office, A. M. A.

2:40 p.m. Panel Discussion on Postgraduate Education of the Doctor —

(a) Responsibility of Medical Schools in Continued Postgraduate Education of the Doctor — George N. Aagaard, Director of Postgraduate Medical Education Program, University of Minnesota.

(b) Function of the State Medical Society in Postgraduate Work — C. W. Smith, M. D., Harrisburg, Pennsylvania.

(c) Survey Findings on Specialization in Colorado — Harold I. Goldman, M. D., Denver, Colorado.

3:40 p.m. Discussion Period.

4:00 p.m. Can Corporations Such as Hospitals Legally Engage in the Practice of Medicine? — Wilbur Bailey, M. D., Los Angeles, California.

4:30 p.m. Report of Committees and Election of Officers.

5:00 p.m. Adjournment.

(Note: All papers will begin exactly as scheduled. No speaker will be allowed to speak overtime.)

## Postgraduate Center for Psychotherapy, Inc.

The Postgraduate Center for Psychotherapy, Inc., the training associate of the Institute for Research in Psychotherapy, Inc., has been granted a provisional charter from the Board of Regents of the New York State Educational Department. It offers intensive training for psychiatrists in psychotherapy leading to certification; also individual courses for general practitioners and non-psychiatric medical specialists in psychotherapy and psychomatic medicine.

Clinical psychologists and psychiatric case workers are trained in methods that are within the scope of their education and skills, and which can contribute to an integrated program.

The primary aim of the program is to encourage the development of teams of psychiatrists, psychologists, and social workers who can organize and operate community psychiatric clinics.

The courses of instruction include practical demonstrations in psychotherapy as well as lectures. The work of all students is supervised by teachers qualified to manage a specific type of problem. Before the psychiatric student completes his training, he has had personal experience under supervision in the management of various types of cases.

*Therapeutic Program:* The Institute, in close coöperation with the Postgraduate Center, also will carry out a therapeutic program. This contemplated activity will consist of the extension of clinic services for those who are in need of psychiatric treatment and are unable to afford the fees of private psychiatrists.

*Research:* A research program is in process to study and to evaluate all existing types of psychotherapy in order to determine their values and limitations, the kinds of patients benefited, and the extent and quality of the successes achieved. The aim is to shorten treatment methods and to render them more efficient.

**Public Educational Program:** The educational program is conducted in several channels; for the lay public, the general practitioner, the specialist in other branches of medicine, and the psychiatrist. It is coordinated with the activities of existing agencies which are working in the same field.

Further information on this program may be obtained by writing to Stephen P. Jewett, M. D., Dean, or to Miss Janice Hatcher, Registrar, Postgraduate Center for Psychotherapy, Inc., 218 East 70th Street, New York 21, New York.

### Department of Health and Welfare Services for Crippled Children Clinic Schedule — 1949

#### ORTHOPEDIC CLINICS

**Portland** — Maine General Hospital, 11.00 a. m.: Jan. 10, Feb. 14, Mar. 14, Apr. 11, May 9, June 13, July 11, Aug. 8, Sept. 12, Oct. 10, Nov. 14, Dec. 12.

**Lewiston** — Central Maine General Hospital, 9.00-11.00 a. m.: Jan. 21, Feb. 18, Mar. 18, Apr. 15, May 20, June 17, July 15, Aug. 19, Sept. 16, Oct. 21, Nov. 18, Dec. 16.

**Rumford** — Community Hospital, 1.30-3.00 p. m.: Mar. 16, June 15, Sept. 21, Dec. 21.

**Waterville** — Thayer Hospital, 1.30-3.00 p. m.: Feb. 24, Apr. 28, June 23, Aug. 25, Oct. 27, Dec. 22.

**Rockland** — Knox County Hospital, 1.30-3.00 p. m.: Feb. 17, May 19, Aug. 18, Nov. 10.

**Machias** — Normal School, 1.30-3.00 p. m.: Feb. 9, Apr. 13, June 8, Aug. 10, Oct. 12, Dec. 14.

**Presque Isle** — Northern Maine Sanatorium, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 11, Mar. 8, May 10, July 13, Sept. 13, Nov. 2.

**Houlton** — Aroostook General Hospital, 9.00-11.00 a. m.: Mar. 7, July 12, Nov. 1.

**Fort Kent** — Normal School, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 12, May 11, Sept. 14.

**Bangor** — Eastern Maine General Hospital, 1.30-3.00 p. m.: Jan. 27, Mar. 24, May 26, July 28, Sept. 22, Nov. 17.

#### CARDIAC CLINICS

**Portland** — Maine General Hospital, 10.00-12.00 a. m.: Will be held every Friday with the exception of holidays.

**Bangor** — Eastern Maine General Hospital, 9.00 a. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

#### HARD-OF-HEARING CLINICS

**Waterville** — Thayer Hospital, 1.30-3.00 p. m.: Feb. 16, June 22, Oct. 19.

*By appointment only.*

#### PEDIATRIC CLINIC SCHEDULE — 1949

**Bangor** — Eastern Maine General Hospital, 1.30 p. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

**Waterville** — Thayer Hospital, 1.30 p. m.: Jan. 4, Feb. 1, Mar. 1, Apr. 5, May 3, June 7, July 5, Aug. 2, Sept. 6, Oct. 4, Nov. 1, Dec. 6.

**Presque Isle** — Northern Maine Sanatorium, 1.30 p. m.: Jan. 26, Mar. 23, May 25, July 27, Sept. 28, Nov. 16.

*By appointment only.*

### Maine Society of Anesthesiologists to Meet at Togus, February 7, 1949

The Maine Society of Anesthesiologists was formed October 26, 1948, and the following officers appointed:

President, Gilbert Clapperton, M. D., Lewiston.

Vice President, Clement S. Dwyer, M. D., Bangor.

Secretary-Treasurer, John R. Lincoln, M. D., Portland.

The functions of the Society are to advance the science and art of anesthesia, and to stimulate interest and promote progress of scientific, cultural and economic aspects of the specialty.

The Maine Society was approved as a component member of the American Society of Anesthesiologists, Inc., November 26, 1948.

On February 7, 1949, the Maine Society will present a Panel Discussion on "Explosive Hazards in the Operating Room," at the Veterans Administration Center, Togus, Maine — the time to be announced.

All members of the medical profession are invited to attend this panel discussion.

## CORRESPONDENCE

Dr. Morris Fishbein  
Editor, *The Journal of the  
American Medical Association*  
535 North Dearborn Street  
Chicago, Illinois

Dear Dr. Fishbein:

It has come to my attention that considerable misunderstanding has developed throughout the medical profession concerning the establishment of fees for medical services to be paid private physicians participating in the so-called "Home Town Medical Care Program for Veterans." It has been contended that the Veterans Administration has arbitrarily established a Fee Schedule which represents the maximum amount which may be paid for any given service and which is, in effect, a National Fee Schedule. It has also been contended that the various State Medical Societies and other interested groups were not consulted when this Fee Schedule was adopted.

In order to clear up any misunderstanding regarding this matter, it is desired to emphasize that my predecessor, Dr. Paul R. Hawley, had no intention at any time of establishing

a National Schedule of Fees, nor do I contemplate doing so. However, the Fee Schedules originally submitted by the various State Medical Societies, when the "Home Town Medical Care Program" was inaugurated, varied so widely in format, terminology, and fees for similar or identical services, that it was deemed advisable to establish a uniform Fee Schedule Format and to set up tentative fees which could be used as a guide by the various State Medical Societies when submitting their proposals for the furnishing of medical care to veterans.

This uniform Fee Schedule Format was formulated by the Professional Group of National Consultants to the Chief Medical Director. This Group, representing the various specialties in medicine and surgery, is composed of eminent physicians from all parts of the country. Tentative fees were set up in the format after a careful analysis of Pre-Paid Medical Care Plan, Workmen's Compensation and Insurance Fee Schedules, and also the Fee Schedules in effect in the various States having agreements with the Veterans Administration. As was to be expected, considerable variation occurred in the Fee Schedules reviewed.

The Professional Group of National Consultants made



every effort to arrive at fees that were considered to be within reasonable limits and which would, as nearly as possible, allow a uniform provisional fee schedule for use as a guide in facilitating and expediting the preparation of agreements between State Medical Societies and the Veterans Administration.

Further attempt was made to provide for elasticity in the charges for certain operations or other services which seemed to evoke more than average contention by listing the minimum and maximum amounts considered equitable. These items bear the notation "AA," which indicates that the fee for the given service is to be determined by arbitration and agreement between the Veterans Administration and the Medical Society concerned.

May I reiterate that the Veterans Administration Fee

Schedule Format is in no sense to be construed as an arbitrary or National Fee Schedule. Furthermore, it is subject to periodic review and such modification as conditions may indicate.

If it meets with your approval, I would appreciate it very much if you could possibly arrange to publish this as an open-letter in the *Journal of the American Medical Association*. I should like this to reach all of the physicians throughout the country, and I know of no better way to do it than through the *Journal*.

Very truly yours,

PAUL B. MAGNUSON,  
Chief Medical Director,  
Veterans Administration,  
Washington, D. C.

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## Index to Advertisers

Abbott Laboratories .....	XXIII
American Meat Institute .....	VI
Ayerst, McKenna & Harrison .....	VII
Borden Prescription Products Div. ....	X
Camel Cigarettes .....	XIII
Camp, S. H. & Co. ....	XIV
Ciba Pharmaceutical Products, Inc. ....	XI
Coca-Cola .....	XX
Coleman & Bell.....	XX
Frye Company, Geo. C. ....	V
Gay Private Hospital .....	XVIII
Hanger .....	XXII
Holland-Rantos Co., Inc. ....	XXI
Hood's .....	XIX
Jones' Private Sanitarium .....	XVIII
Lilly & Company, Eli .....	I-XVIA
Maine Surgical Supply Co. ....	XVII
Mead Johnson & Company .....	XXVI
Medical Auditing Counsel .....	XVII
Merck & Co., Inc .....	XXV
Mutual Benefit Health & Accident Assn ..	VIII
Noyes & Chapman, Inc. ....	XX
Parke, Davis & Company .....	II-III
Philip Morris & Co. ....	IX
Physician's Casualty Association .....	XXII
Schering Corporation .....	XV
Searle, G. D. & Co. ....	31
United States Brewers Foundation ....	XXII
Washington Hospital.....	XVIII
Winthrop-Stearns, Inc. ....	XII
Wyeth, Incorporated .....	XVI
Zemmer Company, The .....	XX

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# The Journal of the Maine Medical Association

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Volume Forty

Portland, Maine, February, 1949

No. 2

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## THE VOLUME OF THE CORONARY VASCULAR BED\* A Method for its Determination

By JULIUS GOTTLIEB, M. D., D. Sc., IRVING I. GOODOF, M. D., VIENO KANGAS, M. T.

From the Laboratories of the Central Maine General Hospital, Lewiston, Maine

The flow of blood in the coronary vascular bed has been the subject of extensive clinical and experimental studies. Medical literature abounds in the discussions of the physiological, the pharmacological, and the pathological aspects of the coronary blood flow. The methods of study include the usual dissection methods and serial histological studies with cross-section measurements and estimates thereby of the coronary bed volume. This latter approach offers only a very rough approximation of the coronary bed volume and requires an impracticable amount of time for each determination.

In the sixteenth century, Vasalius, Fallopius and Riolanus were the first to interest themselves in coronary circulation. In the middle of the eighteenth century, Haller gave an excellent description of the coronary circulation as a result of careful dissection. In the middle of the nineteenth century, Hyrtl and others employed injection methods with heavy metals, resulting in a cast formation representing the circulation after the destruction of the soft tissues by corrosive substances. Early in the twentieth century, Fryett first employed the roentgenographic methods

and shortly thereafter Spalteholtz introduced the clearing technique. The use of wax media was advocated by Lexer and Hildebrand at the turn of the century. Dutton is credited with developing the technique of simultaneous study by injection and roentgenographic examination.

The most detailed study by injection and roentgenography was published by Gross in 1921.<sup>1</sup> The dissection technique, developed by Schlesinger in 1938<sup>2</sup> overcame the difficulties of overlapping of vessels' shadows which had been encountered by Gross and earlier workers. Employment of contrasting stains by Schlesinger in the right and left coronary arteries clarified the problem of anastomosis. Lead acetate was employed as the radiopaque metal because of its high atomic weight which yields a dense shadow in vessels down to forty micra in diameter. Another advantage of lead acetate is that the chemical is contained within the vessels with no diffusion, particularly if kept cool.

The work of Gross and Schlesinger suggested to the authors the possibility of measuring the coronary volume by employing a known concentration of lead in the injection mass and the determination of the amount of lead in the heart after complete injection and digestion of the soft tissues.

---

\* Read before the New England Society of Pathology, and the New England Section of the American College of Physicians.



MATERIALS AND METHODS

Twelve hearts were studied by the Schlesinger technique with X-ray films taken before and after opening the heart. These films were studied with the view of making certain that all vessels were properly injected and that no leakage took place which otherwise would erroneously influence the calculations. Histological sections were also taken when any doubt arose at any site as to whether or not such leakage took place. Only such hearts were studied as showed proper injection both by roentgenological and histological studies. These were subjected to chemical analysis.

*Chemical Procedure:* The hearts were ground to assure proper aliquot samples, generally employing about fifty grams, and digested in one-third of the heart volume of concentrated HCl with five to six grams of tartaric acid added to aid in the solution of lead phosphate. The solution was boiled gently until digested, maintaining volume with distilled water. A suspension of potassium chlorate was added to oxidize any residual organic material, and this procedure was repeated until the solution assumed a straw-yellow color. It was then filtered hot into a one-liter volumetric flask, the filter washed with hot distilled

water, and diluted to volume. This same procedure was carried out on 1 c.c. of hot injection mass, which was dissolved in concentrated HCl and tartaric acid and diluted to 100 c.c. in a volumetric flask. The two solutions were then handled identically.

Ten c.c. of each were measured into 50 c.c. centrifuge tubes and neutralized with NaOH, using congo red as an indicator. They were then acidified with HCl and lead sulfide precipitated with hydrogen sulfide. The precipitate was separated by centrifugation and the supernatant fluid removed. The precipitate was then dissolved in concentrated nitric acid and the liberated hydrogen sulfide removed by boiling. The nitric acid was neutralized with NaOH, using phenolphthalein as indicator, and acidified with dilute acetic acid. Excess of hot potassium dichromate solution was added, to precipitate bright yellow lead chromate, which was separated by centrifugation. The supernatant fluid was discarded and the precipitate washed free of potassium dichromate by repeated centrifugation with distilled water. When potassium dichromate was absent, as evidenced by absence of yellow tinge to the supernatant fluid, the precipitate was dissolved in concentrated HCl, KI added, and the liberated iodine titrated against 0.1 N sodium thiosulfate, using starch as an indicator.

CALCULATIONS

1 c.c. of 0.1 N  $\text{Na}_2\text{S}_2\text{O}_3 = 1.7250 \text{ mgm. Pb.}$   
Heart:  $100 \times \text{c.c. Na}_2\text{S}_2\text{O}_3 \times 1.7250 = \text{mgm. Pb. in heart.}$   
Mass:  $10 \times \text{c.c. Na}_2\text{S}_2\text{O}_3 \times 1.7250 = \text{mgm. Pb. in 1 c.c injection mass.}$   
Coronary volume (to and including arterioles — Schlesinger) =  $\frac{\text{mgm. Pb. in heart.}}{\text{mgm. Pb. in 1 c.c. injection mass.}}$

TABLE I

Weight of Heart in Grams	Volume of Heart (c.c.)	Coronary Volume (c.c.)	Index $\frac{\text{Weight of Heart}}{\text{Volume of Heart}}$
173	14.3	2.84	12.1
195	13.2	2.53	14.8
265	15.8	3.55	16.8
266	17.6	3.56	15.1
270	14.5	2.88	18.6
312	18.9	3.87	16.5
313	21.7	4.10	14.4
333	20.6	5.42	16.1
370	22.4	3.53	16.5
373	20.1	5.24	18.6
376	23.3	5.38	16.1
579	28.5	4.82	20.3



RESULTS

The hearts were weighed and the volume of the hearts were determined by water displacement (Archimedes principle). The weights of these twelve hearts varied from 173 grams to 579 grams and the volumes from 13.2 c.c. to 28.5 c.c. The coronary volumes varied from 2.53 to 5.42 and the coronary indices\* from 12.1 to 20.3. A study of the table indicates that the coronary bed volumes showed an absolute increase with the increase in the total weight of the heart, but a decrease per gram weight of the heart. These values omit, however, the volume of vessels smaller than 40 micra in diameter. Prinzmetl, employing Dock's kerosene injection method, established the fact that the average flow in vessels under 40 micra approximates 4.8% of the total coronary circulation. This, therefore, should be added as a correction factor to the volumes obtained as calculated above.

\*  $\frac{\text{Weight of heart.}}{\text{Volume of heart.}}$

DISCUSSION

The authors present this method as a practical procedure in the determination of coronary bed volume. It is realized that with the study of such a small number of hearts no definite conclusions should be drawn. The figures presented, however, are in accordance with what has previously been assumed as a fact. It has long been taken for granted that in cardiac hypertrophy there is a relatively less vascularity. The results obtained fortify this assumption in most instances. It is also suggestive that measurements of the heart volume may be of value when studied together with the weight of the heart in determining the specific gravity of the material worked with. It may be that more extensive correlation of volume of heart and weight of heart will give a better indication than methods heretofore presented in the determination of the presence or absence of edema and perhaps some other pathological states. Correlation of the

weight of the heart, the volume of the heart, the coronary bed volume, and the indices derived therefrom, may explain the occurrence of cardiac failure in some patients with myocardial hypertrophy. The wide range in degree of hypertrophy and the occurrence of failure has been observed by many workers. It has been postulated that the reason for failure of an enlarged heart is the progress of hypertrophy beyond the capacity of its blood supply. Further studies in this direction by the methods demonstrated above should be pursued to properly establish such an hypothesis. The degree of myocardial edema already referred to may also be determined by this method once satisfactory normal values have been established. With the accumulation of further data an optimal ratio of coronary bed volume to heart weight or volume may be established, thus furnishing a base line for possible post-mortem evaluation of degree of diffuse coronary insufficiency and other variations from normal.

SUMMARY

A practical method is described for post-mortem examination of the coronary bed volume employing the injection method proposed by Gross and Schlesinger and the determination of lead in a known percentage of lead acetate used as injection media. It is suggested that such determinations be correlated with the weights of the heart and the volume of the heart determined by the simple method of water displacement. It is postulated that such studies and correlations will throw further light on the causes of cardiac failure in hypertrophy, in cardiac edema, and possibly other pathological states.

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Routine chest roentgenograms are now made on all patients at the time of their admission to all (Veterans Administration) hospitals and on all veterans who visit our outpatient departments for pension or compensation examinations, unless they have been examined within the previous six months. In addition to this, annual roentgenograms are to be obtained for all hospital employees and all patients who are hospitalized for more than one year.—John B. Barnwell, M. D., *Am. Rev. Tuberc.*, July, 1948.

The appearance of tubercle bacilli in sputum, gastric contents or other body fluids is an extremely significant episode in the course of tuberculous infection. Hence a thorough and systematic search for tubercle bacilli must be instituted in all cases where the presence of tuberculosis is suspected or where tuberculosis must be considered a possibility in differential diagnosis.—Francis J. Weber, M. D., *Pub. Health Rep.*, Sept. 3, 1948.

## WORK WITH MENTAL DEFECTIVES IN A MENTAL HEALTH CLINIC\*

MARGARET R. SIMPSON, M. D., Augusta, Maine\*\*

When the Division of Mental Health was established in June, 1946, it soon became apparent that our clinics would have to handle a rather large number of mental defectives. The other divisions within the Department of Health and Welfare — the Services for Crippled Children and the Division of Maternal and Child Health — had been carrying children who were also mentally retarded and they were anxious to close these cases. Other than the Pownal State School and a bi-monthly clinic at the Bangor State Hospital, there had been no clinic facilities in the State for diagnosing and guiding mental defectives, or, for that matter, those with any psychiatric problem.

Our first year was spent in establishing the division, carrying on an educational program in mental health and doing a small amount of clinical work. Out of 165 cases seen the first year, 51 or 30.9 per cent were diagnosed as mentally defective. We expected this high a percentage because we started seeing the cases belonging to other divisions. A number of their children were being carried on the basis of physical handicaps with the mental state considered secondary. The second year our number of defective cases decreased. Of 310 cases, 71 or 22.9 per cent were diagnosed as defective.

Maine has had no private schools for the mentally handicapped, although several well-known schools in other states have their summer camps here. A few cities have established special classes. Few teachers have been interested in mental defectives and very few have had experience with them elsewhere.

The families of defective children had not been handled too well. Some had been told bluntly that the child was a fool and would never be any different. Others had not been told the true situation and had gone from doctor to doctor. An interesting explanation for a defective child was given by one mother. She said, "The new doctor said that the doctor made my baby's soft spot get hard too fast. He is giving her some treatments and it is getting soft again."

Defective children in school had not fared too well, either. It appeared that the general trend had been to pass the child on as much as possible, keeping him in a grade consistent with his chronological age. First school attendance was based on age, little attention

being given to the emotional and mental development. The situation varied throughout the state. In some areas a good effort at placement had been made and an occasional special class was found. Very few children had been excluded from school because of mental defect. We found a number of children in the first and second grades with a mental age of three.

The problems presented in our work with the mentally defective involved:

1. Explanation to the family regarding the handicap.
2. Attempt at proper school placement.
3. Practical planning for home training and guidance.

We always tried to find an explanation for the deficiency. If a history of prematurity, difficult birth, cyanosis and asphyxia, infectious disease, etc., early in life could be elicited, it was offered to the family as a possible explanation and was eagerly accepted. This, of course, helped to allay any strong guilt feelings on the part of the parents. Most of the parents had been doing as good a job as possible in training their children and they were complimented on their work. They then accepted the diagnosis and advice willingly. A few parents were themselves mentally defective and they were not very concerned about their children. They had come to the clinic because they had been sent by the town manager or city nurse. Sometimes very low-grade children were excluded from school and this had to be explained to the parents. A few children were being treated with glutamic acid by other physicians, and their families were extremely optimistic about what they expected to see. They needed further explanation of the treatment. Of the four children we have seen on this treatment, the only outstanding benefit has been an increase in activity and responsiveness. The I. Q. has not changed materially in a year.

Proper school placement was difficult at times. The mental defectives in school had frequently not been recognized. A number of teachers had no idea of the degrees of mental defect and their associated behavior problems. One teacher was trying to train an eight-year-old boy who was found to have an I. Q. of 38, while teaching a second grade class of thirty-five. She wasn't succeeding and had worked herself into a highly nervous state because of her failure. She said, "But I've got to teach him something, it's my duty as long as he is in my class. It is a reflection

\* Read before the Northeastern Division of the American Association on Mental Deficiency, October 16, 1948, at Pownal State School, Pownal, Maine.

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## SOME DIAGNOSTIC OFFICE PROCEDURES\*

C. LAWRENCE HOLT, M. D., Portland, Maine

Making a differential diagnosis may be compared to betting on the horses. Each "tip," in addition to an individual "hunch," is of importance in aiding a decision. Diagnostic problems in the physician's office may be solved by collecting "tips" as represented by a few simple laboratory procedures. With rare exceptions, however, a single laboratory examination may be of limited value. It may furnish additive or corroborative information. A few simple procedures are worth reviewing, not only because they require no special knowledge or experience in interpretation, but because they can be done with economy of time and expense.

The presence of free hydrochloric acid in the fasting stomach can be proven in less than five minutes by the passage of a Levine tube, the aspiration of gastric contents, and the addition of a few drops of Topfer's reagent. A bright red color indicates free hydrochloric acid. If none is present, .5-1.0 mg. of Histamine base may be injected subcutaneously and a second sample withdrawn at 45 minutes. The absence of free hydrochloric acid is almost incontrovertible evidence against the presence of duodenal ulcer. The presence of free hydrochloric acid is not compatible with a diagnosis of pernicious anemia or combined system disease.

The Guaiac test of stools is important in demonstrating occult blood. The patient suspected of having a gastro-intestinal neoplasm, a bleeding ulcer, or unexplained anemia, should be instructed to bring a relatively fresh specimen of stool to the office in a clean glass jar. A small amount of the feces is placed on a white tile spot plate and mixed with several drops of glacial acetic acid. Then 2-3 drops of gum guaiac solution are added. This solution is prepared by adding 1 gram of gum guaiac to 60 c.c. of 95% alcohol. Then 2-3 drops of 3% aqueous solution of hydrogen peroxide, the regular household variety, are added. If no color results, there is no blood present. If a dull green color develops slowly, the result is graded as plus one, and is of little significance. The prompt appearance of a deep blue color is graded plus three or four, and suggests the presence of blood. It should be recalled that a negative test rules out the presence of blood, but a positive test does not establish its presence since there are many substances which give a false positive. Although occasional single tests may be falsely positive, the general value of repeatedly positive tests was demon-

strated recently in our office by helping establish a diagnosis of carcinoma of the large bowel in two cases having repeatedly negative barium enemata. The popular benzidine test is too sensitive to be of value in office examinations.

The finding of bile in the urine of a feverish, anorexic patient may herald the icteric stage of infectious hepatitis (infectious jaundice), and thus the diagnosis may be made early in the course of the disease. Other conditions, as cirrhosis of the liver, common duct stone, carcinoma of the head of the pancreas or the ampulla, may likewise cause bile to appear in the urine. Hemolytic jaundice of whatever cause is accompanied by an absence of bile in the urine.

The demonstration of bile in urine is most easily accomplished as follows: a test tube, half full of urine, is shaken vigorously with the thumb over the open end. The color of the foam is then compared with that of normal urine, holding both samples against a white background. If the examiner does not expect to do too many tests on a particular afternoon, and if he is reasonably sure he does not have cirrhosis of the liver, he may use his own specimen as the normal control. If the foam is without color, bile may be said to be absent from the sample.

Riboflavin, penicillin and atabrine may cause the foam to be colored yellow, hence the presence of bile must be proved by using a more specific test, as the Harrison spot test. This is accomplished by adding 5 c.c. of a 10% barium chloride solution to 10 c.c. of urine, mixing and filtering. To the precipitate on the filter paper are added a few drops of Fouchet's reagent. A blue or green color indicates the presence of bilirubin. Fouchet's reagent contains 25% trichloroacetic acid and 0.9% ferric chloride.

Although the methylene blue test is not specific for bilirubin, it may be used as a roughly quantitative test in estimating the amount of bilirubin excreted each day in the urine of a jaundiced patient. In this sense the test may replace more refined, complicated procedures, such as daily icteric indices or serum bilirubins in judging whether jaundice is increasing, diminishing, or staying the same. The methylene blue test is performed by adding drop by drop a 0.2% aqueous solution of methylene blue chloride to 5 c.c. of a pre-breakfast urine specimen, using a pipette which delivers 20 drops of the solution per c.c. The reading in drops is taken as one less than

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## THE NEWER DRUGS\*

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It is quite impossible in the time at my disposal to more than briefly cover a very few of the many drugs that have become available in the last year or so. Consequently, I am going to discuss, in brief, several that have to do with different fields of action, rather than try to be too inclusive.

Before doing this, I would like to interject a note of caution with regard to our modern therapeutics. Since we today, and this in marked contrast to the homeopathy of only a few years ago, use specific medicines to achieve a full pharmacologic effect, every physician has not only to be fully aware of the indications and contraindications, but to know and recognize the toxic effects of each drug. It is disconcerting to add a toxic illness to the disease already present. This, however, frequently happens in our modern medicine when grams of a drug are used instead of fractions of a grain.

The drugs I am going to mention have been sufficiently studied so that their value has been substantiated; they are drugs of practical application in general medicine; and they embrace the following general categories:

- a. The anti-histamine drugs
- b. The anti-autonomic drugs
- c. The anti-coagulant drugs
- d. The anti-convulsant drugs
- e. The anti-thyroid drugs

### A. *Anti-histamines*

There are several anti-histamine drugs now available. Of these, benadryl and pyribenzamine have had perhaps the longest trial and are of proven value. These are antispasmodic drugs with seemingly specific anti-histamine properties—they neutralize the effect of histamine, and are used in conditions in which the release of histamine or histamine-like substance is thought to be a factor. Included among these conditions are urticaria, angioneurotic edema, dermatographia, pruritis, hay fever, vasomotor rhinitis, and selected cases of bronchial asthma. They are palliative; the symptoms are controlled, in the face of continued cause, only as long as the drug is continued.

The principal side effects noted after the administration of these drugs are sleepiness, dizziness, dry mouth and nervousness. Of these, sleepiness and dizziness occur more often. Occasionally small

amounts of ephedrine sulfate aid in overcoming this symptom. Their toxicity appears to be low. They have a mild local anesthetic action; if elixir of benadryl is held in the mouth, anesthesia of the tongue develops.

Their effect is usually manifest in from one-half to one hour, and lasts up to eight hours on the average. The average adult dose is 50 mg. 3 to 4 times daily, although as much as 4-500 mg. may be required in a day if symptoms are sufficiently severe.

### B. *Anti-autonomics*

Tetraethylammonium chloride, with trade name of Etamon, is one of several drugs currently being used which in some fashion act to neutralize the effects of sympathetic and parasympathetic innervation. This drug results in vasodilatation with fall in arterial blood pressure, miosis, inhibition of gastrointestinal movements, as well as inhibition of other autonomically innervated structures. Following its administration there is an increase in skin temperature of the extremities, increased blood flow and pulse rate, and a fall in systolic and diastolic pressure.

The drug may be used in several conditions in which an imbalance of the autonomic nervous system is believed to be a factor. Relief of pain often results when it is used in peripheral vascular diseases. It is used in the treatment of Buerger's disease, peripheral arteriosclerosis obliterans, thrombophlebitis, causalgia, reflex sympathetic dystrophy, Sudeck's atrophy, trench foot, functional disorders in Raynaud's disease, acrocyanosis, livedo reticularis, etc. It has been used to relieve the pain of peptic ulcer and the pain and diarrhea of ulcerative colitis. It has been used to evaluate the fall in blood pressure in patients with hypertension; but it is not a treatment for hypertension; the fall in blood pressure is only temporary.

A prominent side effect of the drug is postural hypotension which may last for an hour or so, so that the patient should be kept in the recumbent position for some time following its administration. Patients may experience a metallic taste in the mouth, sensations of cold and tingling in the extremities, and dilatation of the pupils with loss of ocular accommodation. Because of this latter effect, patients should not be allowed to drive a vehicle for several hours after having received the drug. Other side effects which may occur are a feeling of weakness, fatigue and lightheadedness, dryness of the mouth, slowness of speech, loss of appetite, nausea and dyspnea.

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.

This drug should be used with caution in patients with severe hypertension, particularly in the presence of poor renal function or a high diastolic pressure. It should not be used in patients with a recent coronary thrombosis. It should be used with caution in elderly and arteriosclerotic patients who will often experience a severe decrease in blood pressure and a diminution in blood flow in their legs during the hypotension.

Tetraethylammonium chloride has to be given by muscle or vein; it is poorly absorbed orally. The dose is 1.0 to 1.2 gram, not exceeding a total of 20 mg. per kg. of body weight. Its duration of action after intramuscular injection is from 6 to 8 hours. Its continued use for longer than 36 hours may cause considerable distress to the patient.

### C. *Anti-convulsants*

Tridione is an anti-convulsant which should now be used in treatment of petit mal epilepsy, particularly in children. It is also effective in the psychomotor equivalent states. Side reactions to this drug include gastric irritation, nausea, skin eruptions, photosensitivity\* and blurring of vision. If these side effects appear the drug should be withdrawn temporarily or the dosage reduced for a time. Photophobia occurs less frequently in children than in adults. Because of its rare effect on the bone marrow, patients taking the drug steadily should have periodic blood counts. It is contraindicated in patients with advanced renal or hepatic disease, or with disease of the optic nerve, or with blood dyscrasia. The average dose ranges from 1 to 2 grams daily in divided doses, the optimum to be individualized for each patient.

### D. *Anti-coagulants*

Dicumarol is an anti-coagulant acting to decrease the effective prothrombin content of the blood. It is used for the prophylaxis and treatment of intravascular clotting. Following its oral administration there is a latent period of 1 to 2 days, then there is a gradual increase in prothrombin time which reaches a maximum in 3 to 5 days. If a single dose were given, the effect would then gradually taper off during the next 3 to 5 days. Its effect tends to be cumulative and prolonged, and patients vary in their response to the drug. Therefore its use is governed by frequent determinations of the prothrombin activity.

Overdosage may result in severe hemorrhage. There is little tendency for hemorrhage to occur if the prothrombin activity is between 35 and 15 per cent; there is danger if it goes below 10 per cent. The antidote is transfusion with fresh whole or citrated blood and large doses of vitamin K. It is contraindicated in any patient who is bleeding from

any cause, or who has bleeding tendency; it should not be used in the presence of an ulcerating lesion, or in patients who are having constant intubation of the gastro-intestinal tract; it should not be used in the presence of impaired hepatic or renal function.

For the average patient, 200 to 300 mg. are required the first day, and 100 to 200 the second day. Its subsequent doses are dependent upon its effect as measured by prothrombin determinations; the average is perhaps 75 to 100 mg a day.

### E. *Anti-thyroid*

Recent studies of anti-thyroid drugs indicate a wane in thyroid surgery. Thyrotoxicosis can now be treated medically, effectively and with greater economy to the patient than is perhaps afforded by surgery.

Propylthiouracil inhibits the synthesis of thyroxine and thereby the metabolic rate. It seems to be the safest and most effective drug for medical management of hyperthyroidism; it is far less toxic and much more effective than thiouracil. One clinic has reported its use in several hundred patients with no evident toxicity of note. It may take 2 to 4 weeks for the signs of thyrotoxicosis to disappear, and this is especially true if the patient has recently received iodine medication. It may, in rare instances, cause leukopenia, agranulocytosis, drug fever and dermatitis. It is given in doses of 50 mg. 4 times a day for control of toxic symptoms; the maintenance dose thereafter averages 100 mg. daily. Perhaps half the patients will be able to discontinue the drug after 12 to 18 months.

### F. *Dimercaprol*

The last drug which I am going to mention today, dimercaprol (British Anti-Lewisite, BAL.) is used in the treatment of poisoning by heavy metals including arsenic, mercury and gold. It has been postulated that these metals exert toxic effects on biologic systems by reacting with sulfhydryl groups of the protein fraction of cellular enzymes to form mercaptides. This drug is a thiol which has a greater selective affinity for the metal, thus removing it from action on the enzyme system, and allowing its excretion.

Side effects are mild and transitory, of only a few hours' duration, if the recommended dosage is not exceeded. Large doses may cause nausea, vomiting, headache, burning of the mucous membranes, salivation, lacrimation, sense of constriction in the chest, and generalized aches.

It is given as a suspension in oil intramuscularly. In arsenic poisoning the recommended dosage is from 2.5 to 3.0 mg. per kg. body weight; this to be repeated at 4-hour intervals for a total of 4 to 6 injections on each of the first two days. Two injections



may be given daily thereafter for 10 days or until recovery is complete. The dosage in gold poisoning is the same as for arsenic.

Larger doses are required in mercury poisoning. The initial dose is usually 5 mg. per kg. body weight,

followed in one or two hours by a dose of 2.5 mg. per kg./wgt.; and in 2-4 hours by a third similar dose; the same amount may be repeated in cases of severe poisoning after 12 hours. Two doses are given on the second day and one on the third.

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*Work with Mental Defectives in a Mental Health Clinic—Continued from page 38*

on my teaching." She had never considered that the child might be backward or defective and was highly indignant because we could not give her a formula for making him learn.

Occasionally we excluded a young child from school, one who had just begun and was so poorly developed socially and mentally that the classroom routine was disrupted by him. In such a case we discussed home training with the mother, outlining a program to be followed, with the understanding that the child return for evaluation before the beginning of the next school year. Older children who did not present too many behavior difficulties were allowed to remain in school, their work program being arranged at their mental age level, while they sat in a grade consistent with their age or size. We tried to make our advice very practical, recommending only what we knew could be carried out in a particular school. Occasionally the psychologist visited the school and helped the teacher plan routine work for a child. The older low-grade children benefited socially from school attendance. If they had been excluded, they would have been running about the neighborhood without supervision. Many of them came from large families and keeping them in school prevented a family breakdown which might have occurred, with the defective child thrown back on the mother for the entire day.

We found the booklet, *Teach Me*, published by the Mental Health Unit of the Division of Public Institutions of Minnesota very helpful for parents. We had a good supply of these and distributed them freely. Time was spent explaining some of the procedures when necessary, adapting the instructions to fit the particular case. When we found the parent so overprotective that the rest of the family suffered, we advised the mother to give only as much attention

and care to the defective child as she did to any of her normal children. In a small group of cases the presence of a markedly defective child had resulted or was about to result in separation of the parents. The father was the one to leave the home and we were able to prevent it in several instances by interviews with the parents. Supervision and protection of the older children were discussed with the families. Sterilization was considered when parents asked for advice regarding it.

Although most of our cases were under fourteen, some adolescents and young adults were seen. The Division of Vocational Rehabilitation referred cases for psychometric studies because of poor adjustment or work failures. Cases referred for stuttering and other speech defects sometimes were found to be defective. We saw very few defective delinquents, as we did not examine cases routinely for the courts. We examined only a small proportion of the mentally retarded children in schools mainly because our clinic was limited by a shortage of personnel.

The need of further work in this field is great. We would like to see a course in the recognition and handling of mental defectives in school made a part of the curriculum in the Teachers' Colleges and Normal Schools. We would like to see more special classes wherever possible. An outstanding need is placement for the young defectives between one and six years. There seems to be a considerable number of these children. Care of such a child in a large family where there are other young children places a terrific strain on the mother. Most of these families are in the low income group and cannot afford extra household help. Better acceptance and understanding by the community and additional provision for training and guidance are needed for those mental defectives who are not in institutions.

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Health education is recognized as an essential tool in tuberculosis control. The general public must know the seriousness of the disease and its cost in human misery and money before it will accept its re-

sponsibility to support the work financially.—Report, Expert Committee on Tuberculosis, Office International de'Hygiene Publique, Paris, *Pub. Health Rep.*, May 7, 1948.

## ANTIBIOTIC RECENT TRENDS

PHILIP P. THOMPSON, JR., M. D., Portland, Maine

This report will cover for the most part the recent trends in the use of the "Big Three" and only mention briefly the shape of things to come in the field of newer antibiotics.

Since there is the most interest in the cases that don't respond to the accepted methods of therapy, so this review will dwell more fully on how you can better your results in such cases.

The following are general principles of antibiotic therapy:

1. The infecting organism must be sensitive.
2. The antibiotic must get into contact with the bacteria.
3. Dosage must be adequate.
4. You must know the indications for each antibiotic.

In any case, particularly if serious, get a culture or at least a smear, of the blood, sputum, exudate, stool, or spinal fluid before beginning therapy. This is most important in sick children with meningitis, where incorrect therapy may mean the life of the patient within a few hours. In the case of Subacute Bacterial Endocarditis you are committed to at least a month of continuous therapy involving a considerable expense and after beginning antibiotic treatment, you may never get any organism to grow. Gram stain of a smear is very helpful in determining which antibiotic to use.

*Dose-Routes:* The following is an outline of methods and dosage of the not commonly used routes of administration.

*Intrathecal:*

1. Sulfonamides: Not used.
2. Streptomycin: 50 mgm., rarely 100 mgm. in 10 c.c. of spinal fluid or P.S.S.
3. Penicillin: 20,000 units in 10 c.c.

*Aerosol:*

1. Sulfa as microcrystalline powder: .5 gm. every 6 hours (not often used).
2. Streptomycin: .1-.2 gm. every 6 hours.
3. Penicillin: 50-100,000 units in 1.0 c.c. of saline every four to six hours.

*Intrapleural or Intraabdominal:*

1. Sulfonamides: Not used.
2. Streptomycin: .5 gm. to 1.0 gm. in 20 c.c. of normal saline.
3. Penicillin: 500,000 units in 20 c.c. of normal saline.

The use of penicillin with or without streptomycin after surgery where there has been contamination of the chest or abdominal cavity has given excellent results.

*Locally:*

1. Penicillin: 1000 units to each c.c.
2. Streptomycin: 1.0 gm. to each liter.
3. Tyrothricin: Usually as the ointment "Tyroderm."
4. Bacitracin: 100 to 500 units per c.c. of normal saline not water.
5. Aureomycin as eye drops: One drop of a .5% solution of the borated salt every hour.<sup>1</sup>

The local use of a solution of penicillin and streptomycin is particularly useful in preparation of wounds prior to skin grafting.

*Dose-Interval:* It is generally felt that the long interval between intramuscular injections is just as satisfactory as the previously used short interval.<sup>2</sup> It is recommended to give streptomycin or crystalline penicillin at eight or twelve-hour intervals, rather than by the old three to six-hour schedule. In the case of streptomycin, when given over a long period of time to tuberculosis patients, the long interval was found to be much less toxic.<sup>3</sup> The procaine penicillin combinations are given every twelve to twenty-four hours.

*New Antibiotic Preparations:* The following are some of the newer preparations of the antibiotics:

*Sulfonamides:* Most of the recent work seems to indicate that the safest method of administration of these drugs is with the use of a combination of two or three of the common types. This is to reduce the renal complications, because they are independently soluble in the urine. However, if renal function is good and fluids can be maintained in adequate amounts, sulfadiazine is the one most commonly in use.

The three in combination i.e. 'thiazole, 'merazine, and 'diazine, are available in .5 gm. tablets as "Pan-Sulfa," "Combisul," and as a liquid "Tri-Sulfanyl" or "Eskadamer." A teaspoonful of the liquid contains .5 gm. The "Tri-Sulfanyl" contains in addition .375 gm. of Sodium Citrate to the teaspoonful. It is probably best to give an alkali even with the combinations although most authors claim it is not necessary.

The non-absorbable sulfonamides for use in infections of the gastro-intestinal tract are "Sulfathal-



adine," "Sulfasuxidine," and "Sulfaquanidine." The 'thaladine is given in dosage of four to six grams a day, while the two latter are given in dosages of twelve grams a day. Sulfasuxidine has an advantage in cases with partial obstruction in that it makes the stools soft.

*Penicillin:* Most of the newer penicillin preparations for intramuscular injections are prepared with procaine. To this has been added a 2% aluminum monosterate which is supposed to prevent needle plugging and syringe sticking. The claim is that these procaine preparations need be given only every 48 hours but the 24-hour interval is usually adhered to.

The following are some of the procaine-monosterate preparations: "Depo-penicillin," "Flo-cillin," and "Paxillin." Penicillin is also put up as procaine powder which is soluble in water but lasts only four days after being put in solution. It is also combined with epinephrin in an oil base, giving slow absorption, and is said to be effective given s.c. This latter preparation is called "Intracillin."

Oral tablets are available in 50,000 and 100,000 units. The addition of alkali is not necessary.<sup>4</sup> There is a new oral tablet of aluminum penicillin that the company claims is as effective as I.M. However, in general the dosage of oral penicillin should be three to four times the intramuscular dose.

Troches of 5,000 units are available for treatment of Vincent's infections of the mouth and pharynx.

*Aerosol:* The new developments in aerosol therapy are two: one is the "Aerohalor" inhalator used with finely divided penicillin powder which comes in cartridges with a sifter. This contraption does away with the necessity of oxygen or compressed air. It is smoked like a pipe or inhaled through the nose. Some spectacular results in the treatment of the common cold and U. R. I. infections are reported.<sup>5</sup> The cartridges contain 100,000 units each and later may be available with .3 gm. of powdered streptomycin. The other advance is provided by the Vaponererin Company which has a nebulizer, mask, and electrically driven compressed air unit which, too, can be used in the home or office.

There is also on the market a water soluble tablet containing 50,000 units of penicillin. This is simply dropped into the usual type nebulizer and add one c.c. of normal saline.

*Locally:* "Bacitracin" will soon be on the market. This can be used as topical application to infected wounds and ulcers. As well it can be injected into a boil or larger abscess cavity in amounts of .5-1.0 c.c. It is recommended that this powder be dissolved in saline not water because it is less toxic as salt solution.

### Adjuncts to penicillin therapy:

There is only one drug that can be classed as an adjunct. This is Caronamide or the trade name of "Staticin." Its action is to increase the blood level of penicillin by decreasing penicillin excretion. It works, according to many articles,<sup>6, 7, 8</sup> raising the blood level two to four fold. It is available in .5 gm. tablets and the dosage is 2.0 to 4.0 gm. every four hours. (Costs about \$4.00 per 100.)

*Streptomycin:* There is on the market a new type called Di-hydro-streptomycin which is said to be less toxic than that now in use.

*Special Techniques:* What to do if the infection does not respond:

1. Get another smear and culture, for you may have a super-infection of an organism not sensitive to the particular antibiotic being used.
2. Test sensitivity of the organism.
3. Look for abscess, exudate, or obstruction in the form of foreign body, tumor, or stone.
4. Check blood level of antibiotic.

Antibiotics are not substitutes for surgery in infections—merely adjuncts. The most common cause of failure of antibiotics is incomplete drainage.

*Sulfonamides:* If you have checked the above mentioned procedures then; if you are using sulfonamides, you may add urea in amounts of 30.0 gm. every four hours.<sup>9</sup> First be sure of the kidney function, a fluid intake of 2500 c.c., and urinary output of at least 1500 c.c. The reason for using urea is to inhibit the sulfonamide inhibitors. In addition, you may add the I.V. route of administration, and; as is usually done too often in the use of all antibiotics, increase the dose, instead of reexamining the patient for complications.

*Streptomycin:* If you are using streptomycin, you will get definitely better results if you alkalinize the patient.<sup>10, 11</sup> This is especially true of urinary tract infections and if the patient is acidotic. The fluids should be limited to no more than 2000 c.c. a day.<sup>10</sup>

A note on alkalinization perhaps should be mentioned. This can and should be checked in urinary infections with use of nitrazine paper (Squibb) which determines the exact pH of the urine. The patient can do this himself and keep a record of it.

As well it may be wise to add another route of administration such as oral, in the case of bowel<sup>12</sup> infections or aerosol in the case of pulmonary infections.

In the case of pulmonary infections with exudate, prepare patient before aerosol therapy by the use of postural drainage, then inhalation of 1.0 c.c. of .25% solution of neosynepherin. Then some authors recommend using "Zephiran" in 1:1000 aqueous so-

lution as solvent for penicillin. This acts as a detergent.

**Toxicity: Dangers and Toxic Reactions:** In general, check skin, blood, urine, and eighth nerve for evidence of toxicity.

The toxic reactions of sulfa are well known to you, but following the urine for amount and sediment contents, and the blood by white blood counts should be reemphasized. Penicillin causes difficulties chiefly in regards to the skin, with a death recently reported from exfoliative dermatitis and near deaths from angioneurotic edema. A death has been reported resulting from oil and wax pulmonary embolus when injected intravenously by mistake in the buttocks. Caution should be used in its use in allergic individuals and elderly people with extensive skin disease. Benadryl controls the urticaria of penicillin sensitivity.

Streptomycin has real dangers associated with its use, these being principally relative to eighth nerve involvement. This serious toxic reaction warrants discontinuing the drug unless the life of the patient is at stake. It is particularly common when large doses are used or in presence of poor renal function in which case the drug accumulates. Careful testing of hearing with audiometer or tuning fork quantitatively and for vertigo should be routine when the drug is being used. It may cause fever, so a false impression of the continuation of the infection may be had. Renal damage, particularly albuminuria may be caused by this drug. For most cases 1.0 gm. of streptomycin a day is sufficient. In general 4.0 gm. per day should not be given longer than one week, 2.0 gm. per day longer than two weeks, and 1.0 gm. per day for long periods.

**Specific Uses:** The following are a list of the infections formerly not responsive to specific therapy. I shall merely mention the disease and state the results of therapy in general terms.

Tuleremia—good to excellent. Streptomycin.

Brucellosis, acute—fair to good, chronic—poor to fair. Streptomycin and sulfa.

T. B. good with certain types—Draining sinuses, abdominal, laryngitis, and miliary. Streptomycin.

Typhoid with oral and I.M. Streptomycin—fair.

H. influenza, meningitis, pneumonia, and epiglottitis—good to excellent with streptomycin.

Freidlander's infections of lungs—fair with streptomycin.

Bucillary dysentery—fair to good with streptomycin and sulfathaladine.

Peritonitis —fair to good with use of all three.

Epidemic diarrhea of new born—good with I.M. and oral streptomycin.

Urinary infections—good to excellent with alkali and streptomycin.

Ulcerative colitis—poor to fair with sulfadiazine and streptomycin.

Agranulocytosis—good to excellent with penicillin.

Preparation of G.I. tract for surgery or post-operative in presence of any infection—good to excellent with streptomycin and penicillin.

## THE NEWER ANTIBIOTICS

To gain a knowledge of antibiotics

According to Paul DeKruif

One need only consult the *Readers Digest*,  
*Pic*, and *Time*, or *Life*.

The statistics are super sensational

The virus gets the axe,

His dissertation is highly dramatic.

The following are the facts:

Aureomycin,<sup>17</sup> from gold-colored mold

May cut your work in half

With conjunctivitis, virus pneumonia and

Buboes

And the frequent gram positive staph.

For Rickettsia, Berellia, Psitticoses,

Chloromycetin's<sup>16</sup> the thing,

Typhus is equally blitzed and subdued

To them this drug is king.

Credit is due to Bacitracin

When carbuncles heal up fast,

Cellulitis, furuncles, styes,

Deep abscesses seldom last.

Gramacidin, a flash in the pan,

Has lost its original glamour,

It's use is nil, its future bleak,

And, it ain't for killing "Gramma."

Chloromycetin bids fair to be the true miracle drug of the future. It is effective against Gram positive and negative organisms, Rickettsia, and viruses, is non-toxic, and can be given by mouth. Dose is 1.0 gm. per day.

## SUMMARY

In this review an attempt is made to bring you up to date in the antibiotic field. There has been so much to cover that much has been purposely omitted and probably as much overlooked.

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*Some Diagnostic Office Procedures—Continued from page 39*

the number needed to change the color from green to blue.

The bromsulphthalin test is a reliable index of liver function, and may be done simply by injecting 5 mg. of the solution per kilogram body weight into an anti-cubital vein, withdrawing a specimen of blood from the opposite arm in 45 minutes and collecting the serum after the blood has clotted. A few drops of 10% sodium hydroxide are then added and the serum compared with a standard set of comparators obtainable from Hynson, Wescott and Dunning, the drug firm preparing and distributing the bromsulphthalin solution. If more than 8-10% of the injected bromsulphthalin is present at the end of 45 minutes, the liver is functioning in a pathological manner.

Certain blood tests in the office are of value. An accurate determination of the hemoglobin content may be done using the Sahli technique. This is not only simpler than a red blood cell count, but far more accurate. The establishment of the diagnosis of anemia may thus be accomplished, or the progress of an anemic patient may be followed in a precise manner. The presence of or continuation of such diseases as rheumatic fever, tuberculosis, undulant fever, rheumatoid arthritis may be demonstrated by use of the sedimentation rate, a phenomenon depending apparently on the amount of fibrinogen present in the plasma. Certain malignancies and processes causing tissue necrosis as myocardial infarction result in increased sedimentation rates. The erythrocyte sedimentation is truly a non-specific test, but is of value in following the previously mentioned infections or processes. The Westergren Method is the simplest and hence is recommended for office use.

In ordinary cases, there is no correction necessary

for anemia, and the method thus differs from the more accurate Wintrobe or Ernstene-Rourke technique. Venous blood is drawn promptly, and exactly 3.0 c.c. of the blood are added to 0.75 c.c. of 3.8% sodium citrate solution in a calibrated tube. The blood is mixed and drawn into a Westergren tube to the height of 200 mm. (zero mark). At the end of exactly one hour, one determines the distance of fall of the erythrocyte column. Values up to 11-12 mm. per hour are normal for women and children, up to 7 mm. per hour for men. Values between 12 and 20 are probably pathological. Values in the thirties are decidedly pathological.

Urine should be tested for albumin and sugar and the specific gravity should be determined. Single specific gravity readings of 1.022 and above indicate an ability of the kidney to concentrate well. The Fishberg concentration test may be modified so that a fair index of renal function may be obtained with a minimum of effort. The patient is instructed to drink no fluids with or after the evening meal. Any urine passed during the night is discarded. The first specimen passed in the morning, at 7 a. m. for example, is discarded. Samples passed at 8, 8.30, 9 a. m. are saved and labeled. Specific gravity determinations are then made on these samples. An ability of the kidney to concentrate is indicated by specific gravity readings of 1.022 and above. Readings below this level suggest pathological renal function.

The laboratory procedures described in this presentation represent just a few of the simple basic tests that the physician may perform in his office with a minimum of trouble. Many other tests not mentioned are of importance and value, but have been omitted for the sake of practicality and simplicity.

## CLINICO-PATHOLOGICAL EXERCISE

## Case Presented at the Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

This is the case of a 56-year-old white married female, who was admitted to the hospital with a complaint of constipation, slight anorexia, and tenderness in the right lower abdomen of 5 days' duration.

Five days before admission to the hospital the patient began to notice slight feeling of abdominal distress described as discomfort from gas. She felt that she should have an adequate bowel movement, but none occurred that day. She also had slight elevation of temperature, and called her local physician, who recommended a saline cathartic, which she took that night with small liquid results. The following day she continued to have anorexia and feeling of gastric distress. She was seen by a doctor, who, on examination, found marked tenderness and a small mass in the right lower quadrant. Her temperature that afternoon was 102 degrees. She had been passing gas by rectum. She had had no abdominal pain, but felt that she was still constipated. Another saline cathartic was taken with small liquid results. When her abdominal tenderness persisted, the next day, a white blood count was done by the physician and found to be elevated. She was then advised to come to the hospital for investigation.

For 3 days prior to admission her symptoms had gradually subsided. The abdominal distress subsided, and the bowels were moving again with mineral oil. The tenderness in the right lower quadrant was no longer present. She did describe a feeling of distress referred to a region just posterior to the anus, which she described as particularly strong during a bowel movement. This had occurred twice during the present episode.

Past history: Appendectomy 24 years prior to admission. D. and C. because of excessive catamenia 6 years prior to admission. No other hospitalization.

System reviews: G. I.: Constipation, controlled by taking mineral oil every 5 days. Also history of "large bowel" irritability and "mucous shreds in stools." No weight loss. No blood in stool. Appetite good. G. U.: Menopause 5 years prior to admission, uneventful except for hot flashes and mental symptoms—both controlled by Theelin, which she took every 5 days. C. V.: Negative. Respiratory negative.

Physical examination: Temperature 98.6 degrees, pulse 70, respirations 20, blood pressure 125/60. Head negative. Pupils reacted to light and accommodation. Mouth negative. Nose clear. Throat not

injected, mucous membranes normal color. Neck, no regional adenopathy. Chest completely negative to percussion, auscultation, and tactile fremitus. Breasts normal, no masses or tenderness. Heart not enlarged to percussion, sounds regular, good quality, no murmurs. Peripheral vessels not remarkable. Abdomen soft. Liver, kidneys, spleen not palpable; scar in left lower abdomen. There is a round, firm, non-tender mass approximately 3 inches in diameter, which seems to be fixed to the left parietes. Tenderness to percussion over the large bowel. Pelvic: Cervix small, amputated; uterus freely movable, vaults clear.

X-ray: August 23: Barium enema: The whole colon filled without delay to the cecum. Nothing remarkable was seen until the barium reached the lower portion of the ascending colon, in the area corresponding to the palpable mass which was overlaying the crest of the right ilium. At this point there was a definite concave defect in the lateral portion of the right colon. Mucous membranes, however, appeared to be perfectly normal. The mass was freely movable and the colon moved with it, suggesting that it was adherent to the lateral wall of the colon. Distal to this, on the lateral wall of the descending colon were three diverticuli. There was no spasm in the region of the mass, and the cecum filled normally. There was a filling defect which measured 1.5 cm. in diameter, with a fleck of barium in the central portion of it. Impression: "Findings suggest a tumor of the right lower quadrant, which is adherent to the lateral wall of the colon, but apparently does not project into the lumen. There are also multiple diverticuli distal to this point. Differential diagnosis: (1) An inflammatory mass, possibly due to a ruptured diverticulum, in which one would expect more spasm in the region of the lesion, which does not appear to be present. (2) Carcinoma. I believe this is unlikely inasmuch as it does not project into the lumen. A lymphoma is possible. (3) Negative shadow is described in the region of the cecum, probably due to a polyp. In one of the films there is a suggestion of a polyp at the tip of the cecum, and another about 1/2 inch above it."

X-ray: August 26: G. I. series: "Stomach is somewhat low in position. Its outline is regular, peristalsis is normal, no defects. Stomach is emptied very rapidly, so that an hour after giving the barium there is only a small residue left in the stomach, and



there is no residue at the end of six hours. The head of the barium column at the end of six hours is in the descending colon. At the end of 24 hours the whole colon is practically empty, only a few flecks of barium distributed throughout the whole colon. At the time of the six-hour examination the cecum was well filled. There was still a defect in the ascending colon in the area described in the previous examination. However the negative shadows which suggested a polyp in the first examination are not confirmed at this time. One of them was apparently at the entrance of the ileum into the cecum. Therefore it is probably an invagination of the ileo-cecal valve into the cecum. As before, mucous membrane passages are normal. Impression: I believe that the most probable diagnosis is inflammatory mass adherent to the ascending colon, in the region described above. I believe that the polyps as stated above are unlikely."

Chest: "In the peripheral region the lung fields show nothing remarkable. Diaphragms move normally with respiration. The costophrenic angles are clear. Impression: Negative."

Laboratory: 8/24: Urine: Clear, light straw; S. G. 1.007, alb. 5 mgs., no sugar, no acetone, no diacetic acid, no casts, no RBC, 3-4 WBC, 1 plus epithelial cells, 1 plus bacteria. Blood: 8/22: HB 104%, 15 gms., RBC 4,600,000, WBC 8,700, neutrophils 62%, lymphs 27%, polys 5.3%.

8/24: WBC 6,200, neutrophils 61%, eosinophils 5%, lymphs 25%, monocytes 9%, platelets normal. Sedimentation rate 36 m.m./hr. Stool 8/27: General appearance formed; color grayish-yellow, no occult blood, no mucous, no ova.

Course in hospital: The patient was hospitalized 8/22 and operated on 8/28. During that period there was no particular change in her condition. On 8/27 her temperature rose to 99.4%.

#### DISCUSSION

*Dr. Louis Asali:* We have here the case of a 56-year-old woman who had previously been well until 5 days prior to admission, when she complained of abdominal distress, anorexia, constipation, and tenderness in the right lower quadrant. On examination by local physician at home the temperature and white blood count were reported to be elevated, and a tender mass in the right lower quadrant was discovered.

In the interval between examination at home and admission to the hospital the abdominal distress, tenderness, and temperature had subsided, and the only positive finding on physical examination was the presence of a mass in the right lower quadrant.

Urinalysis and blood studies were essentially normal except for the elevation of the sedimentation rate, and X-ray studies revealed a tumor of the right lower quadrant, adherent to the lateral wall of the

colon with no projection into the lumen of the bowel, and presence of diverticuli distal to this point.

With a history of abdominal distress, anorexia, constipation, elevated temperature, and sedimentation rate, and the presence of a tender mass in the right lower quadrant a diagnosis of appendicitis with perforation, localized, cannot be discounted, and would be first choice, excepting that appendectomy had been performed 24 years prior to present admission.

Therefore a diagnosis must be made from the positive findings of a mass in the right lower quadrant, increased sedimentation rate, and X-ray findings with the presence of a mass the basis of diagnosis:

I will divide my diagnosis into four parts:

#### I

Carcinoma colon  
Carcinoid  
Retroperitoneal tumor  
Lymphoma  
Ectopic kidney

#### II

Actinomycosis  
TBC  
Lues

#### III

Appendicitis  
Diverticulitis

#### IV

Solitary ulcer  
Foreign body

All the above will produce tumor formation in the right lower quadrant, and may give increased sedimentation rate if ulceration is present.

If we are to assume that the X-ray findings are correct, carcinoma of the caecum can be eliminated because of the normal mucous membrane pattern, but X-rays can be wrong, so I will not eliminate it. Retroperitoneal tumor can not be eliminated by X-ray findings. Lymphoma may be eliminated, as solitary lymphoma is very rare, and ectopic kidney may also be ruled out by duration of the tumor mass.

In the second group of granulomatous lesions, actinomycoses cannot be ruled out by X-ray and will produce tumefaction and increase in sedimentation rate.

Tuberculosis can be ruled out because of lack of other findings of tuberculosis and negative chest plate.

Lues cannot be eliminated from any diagnosis unless there is a negative Wassermann, but we have no blood report and cannot eliminate it.

In the third group of inflammatory lesions appendicitis can be eliminated, unless the appendix had not been removed. We will omit it.

*Continued on page 58*

## THE PRESIDENT'S PAGE

The First National Conference of the National Education Campaign of the American Medical Association was held in Chicago, February 12th. Officers and representatives of the various State associations who were fortunate enough to attend this meeting took back to their constituents certain outstanding information :

1. That the American Medical Association has a very definite plan for better health facilities on the national, state and local levels.

2. That the money to be raised from the \$25.00 assessment on the membership is to be used in an intensive campaign of education of the laity. Nothing is to be spent for political lobbying.

3. That the success of the educational campaign will depend on cooperative action between the medical profession and all other civic minded groups who are interested in the betterment of the American people as a whole.

4. That all worth-while public health projects will receive full endorsement when freed from political domination.

5. That the utmost opposition will be directed against *compulsory* health insurance; and every effort made to secure ever wider distribution of *voluntary* medical insurance plans.

6. That coordinated plans will emanate from Chicago headquarters.

7. That zealous execution of these plans on the local levels will surely help the American people save themselves from bureaucratic control in the fields of medicine and public health.

We look forward with anticipation to further information and direction from the planning committee.

FORREST B. AMES, M. D.,

*President, Maine Medical Association.*



## EDITORIALS

### **The American Medical Association Assessment**

At a meeting of the Council of the Maine Medical Association, held January 26, 1949, at Augusta, Maine, it was voted that the twenty-five dollar American Medical Association assessment be collected through the Secretary's office. The bills were promptly sent out. Approximately fifty per cent of the members have already paid.

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### **Doctor in Cabinet Proposed**

At a meeting of the American Medical Association, held in Chicago, February 12, 1949, a Twelve-Point Program was listed for the entire Nation.

#### *Seeks a United States Health Department*

The American Medical Association offered organized medicine alternative to compulsory health insurance. It would create a new "Federal Department of Health," headed by a Doctor of Medicine with Cabinet Rank. The new agency would be charged with "coordination and integration of all federal health activities," except in the Armed Forces.

The twelve-point program includes expansion of voluntary hospital and medical care plans, and "establishment in each State of a medical care authority to receive and administer funds with representation of medical and consumer interest." The proposed federal department would foster medical and hospital facilities, including those for the care of the aged and chronically ill; stepped-up medical and nursing education, medical research, public health education and other programs.

It is a counter proposal to the compulsory health insurance bills now before Congress. The A. M. A. Twelve-Point Program follows.

## PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE AND PUBLIC HEALTH

### *A Federal Department of Health*

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine, and the coordination and integration of all Federal health activities under this Department, except for the military activities of the medical services of the armed forces.

### *Medical Research*

2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

### *Voluntary Insurance*

3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

### *Medical Care Authority with Consumer Representation*

4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

### *New Facilities*

5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

### *Public Health*

6. Establishment of local public health units and services and incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

### *Mental Hygiene*

7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

### *Health Education*

8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

### *Chronic Diseases and the Aged*

9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

### *Veterans' Medical Care*

10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

### *Industrial Medicine*

11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

### *Medical Education and Personnel*

12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.



## NECROLOGIES



**Theodore E. Hardy, M. D.**  
**1905 - 1949**

The Medical Profession of Maine suffered a severe loss in the death of Dr. Theodore E. Hardy, Director of Anaesthesia at the Thayer Hospital, which occurred on February 11th. Dr. Hardy had been in poor health for some time but was beginning to feel better and had been to the hospital that morning to give a spinal anesthesia.

Dr. Hardy was born in North Vassalboro August 15, 1905, the son of the late Dr. Theodore E. Hardy, a prominent Waterville physician and a Past President of the Maine Medical Association, and Mrs. Maude Wentworth Hardy. Coming to Waterville at the age of eight, he attended Coburn Classical Institute and Colby College, graduating from Colby in 1928. He received the degree of Doctor of Medicine from Harvard Medical School in 1932, after which he interned at the Newton Hospital, Newton, Massachusetts. On August 5, 1933, he was married to Doris S. Wright of Laconia, New Hampshire.

He was a member of Zeta Psi and Alpha Kappa Kappa fraternities, the Masons, the Rotary Club, the American and Maine Medical Associations and the American Society of Anaesthesiologists. He was elected as a member of the Scientific Committee of the Maine Medical Association in 1946 and was its delegate to the Massachusetts Medical Society last year. He was a trustee of Coburn Classical Institute.

From 1942 to 1946 he served in the U. S. Army Medical Corps, his last assignment being Assistant Chief of Medicine at England General Hospital, Atlantic City, New Jersey. He was discharged with the rank of Major in 1946.

Returning to private practice in Waterville, he organized

the department of anaesthesia at the Thayer Hospital, serving as its Director and also as Secretary of the Staff. He was appointed College Physician at Colby and gave unstintingly of his services to the institution.

Through his skill as a physician, his unselfish devotion to his profession and his unfailing kindness to everybody, he endeared himself to patients and students alike. An incident last Christmas typifies the esteem in which Dr. Hardy was held in his community. He had been confined to his bed for about four months. A group of friends and appreciative patients purchased a new automobile and presented it to him as a Christmas gift.

Ted Hardy was always one who gave of himself. He had a rare sense of humor which, combined with his friendly disposition and keenness of mind, made him a most valuable member of the hospital staff. His contributions to the weekly meetings were always to the point and his opinions as a consultant were in constant demand. His death came as a distinct shock to all who knew him. And to know him was to love him.

The entire medical profession of Waterville acted as Honorary Bearers at his funeral on Sunday, February 13th. The Congregational Church was packed to overflowing by those desirous of paying a last tribute to a well-beloved physician.

Surviving are his widow, his mother, three children, Elizabeth, 13, Theodore, Jr., 10, and John, 7, and a sister, Miss Doris Hardy, all of Waterville.

FREDERICK T. HILL, M. D.

## John Lyman Pepper, A. M., M. D.

### Physician and Scholar

1865 - 1948

Born in Farmington, Maine, on June 11, 1865, John Lyman Pepper was the only child of the Reverend and Mrs. Elbridge Pepper (nee Hannah Maria Lincoln). When eight years old, he forsook the teachings of his Baptist-minister father and entered Colby Academy. His secondary education was obtained at Coburn Classical Institute at Waterville, Maine, where his interest in poetic arts led to the publication of much original verse in local newspapers. Later, at Colby College, John Pepper turned his attention to athletics and gymnastics and became captain of the college fencing team.

The question of training for a profession was soon answered by his turn to the medical field, and, after receiving his bachelor of arts degree from Colby in 1889, he enrolled in the Bowdoin Medical School which awarded him the degree of doctor of medicine in 1894.

In 1892, John Pepper had married Jean Wright, of Lewiston, Maine, and, following his graduation from Bowdoin, they moved to Madison where the then Doctor Pepper began his medical practice. With them was their one-year-old daughter, Mary Budd Pepper, who had been born at Norridgewock during the doctor's last year in college.

Until 1917, he practiced medicine and surgery in Madison, developing a reputation as a skillful surgeon. With this country's entry into the first World War, however, Dr. Pepper accepted a commission as lieutenant in the medical corps with the 376th Flying Squadron, at Mitchell Field. He was then ordered, as post surgeon, to the army hospital at Toledo, Ohio. At the close of the war he relinquished his commission as captain and returned to Maine to set up practice in Belfast and then, again, in Madison.

An accident that caused the loss of his right arm brought an end to his practicing in Madison and wrote "finis" to a promising career of surgery. In 1921 he was appointed health officer for the counties of Cumberland, York, and Oxford, an office which he held until his retirement in 1942.

Throughout his life, however, the love of learning fostered numerous avocations that produced a distinguished scholar. Early in life he had built a solid foundation of Latin, as well as many other languages, and in 1947 his early experiments in poetry were rewarded by the acclaim that critics and educators bestowed upon his metrical translation of Virgil's Aeneid. In recognition of his classical scholarship, Colby College awarded him an honorary master of arts degree.

On December 28, 1948, the pages of Dr. John Lyman Pepper's diary closed—pages of surgery, public service, arts

and sciences. A few months after the death of his wife he left this world to join her in another.

JOHN BARKER.

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The "accident" to which the doctor's grandson, John Barker, alludes in the foregoing was no run-of-the-mill affair but was caused by a bomb that had not passed through the mail but had been left for the doctor—stamped to deceive—in the local drug store-post office at Anson. The doctor had ordered some seeds and supposed that these were they. Arrived at his office he began unwrapping his "seeds," when an explosion occurred that shattered his right forearm, necessitating amputation at the elbow, blew off his left forefinger and filled his eyes with powder that almost blinded him. The fiend who perpetrated this dastardly act was never apprehended. A "grateful patient" was suspected.

The superb indifference to his physical handicap which Dr. Pepper maintained to the day of his death would have done credit to a saint. It was sublime! Not once in the many years that I knew him did he refer to it.

Temporarily down but not out, the doctor put aside his life's ambition to become a surgeon, not an easy thing to do, and accepted the position of health officer in southern Maine where he worked faithfully and effectively for twenty-one years. Concurrently, as an avocation, he made his metrical translation of Virgil's Aeneid which was received with such enthusiasm by scholars that Colby College awarded him an honorary degree of Master of Arts for it in 1947.

Dr. Pepper cannot be said to have been popular among his colleagues because he was not a good mixer but, more especially, because his thoughts were not their thoughts. His mind was concerned with studies of the histories of ancient Civilizations and with the Classics. He had no penchant for small talk and his domineering personality irked many who respected his learning.

In his copy of *The Kasidah* which his daughter has presented to me in memory of him, I found one marked passage which, to me, sums up the doctor's philosophy of life:—

"Do what thy manhood bids thee do,  
from none but self expect applause;  
He noblest lives and noblest dies  
who makes and keep his self-made laws."

E. W. GEHRING, M. D.



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## COUNTY SOCIETY NOTES

### Hancock

The monthly meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, Maine, January 12, 1949.

The subject of the twenty-five dollar assessment by the American Medical Association was brought up for discussion. A motion was made that the society go on record as opposed to making payment of this assessment a pre-requisite for membership in the county society. After a brief discussion, the motion was seconded and carried unanimously. A discussion of various forms of voluntary health insurance in relation to Federal health insurance followed.

Dr. M. A. Torrey of Ellsworth then presented a talk on "Some Common Otologic Problems from the Standpoint of the General Practitioner."

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Kennebec

A regular meeting of the Kennebec County Medical Association was held at the Central Maine Sanatorium, Fairfield, Maine, January 20, 1949.

The meeting began shortly after five o'clock with the presentation of the following cases: Amyloid Disease, Pulmonary Cavities, Embryonal Tumor of the Kidney, and Pneumo-thorax with Cardiac Condition.

The business meeting was called to order by the President, Dr. Harold E. Small, at 8.20 P. M. Dr. John D. Southworth, of Togus, was elected to membership.

Dr. Joseph D. Wassersug, of the Boston City Hospital, guest speaker of the evening, spoke on "The Management of Tuberculosis Cases."

There were twenty-six present.

A. H. MORRELL, M. D.,  
*Secretary.*

### Lincoln-Sagadahoc

The annual meeting of the Lincoln-Sagadahoc Medical Society was held at the Ledges, Newcastle, Maine, January 18, 1949.

The following officers were elected for the coming year:

President, Philip H. Sylvester, M. D., Damariscotta.

Vice-President, Harry F. Morin, M. D., Bath.

Secretary-Treasurer, Neil L. Parsons, M. D., Damariscotta.

Delegates to the Maine Medical Association: Robert W. Belknap, M. D., Damariscotta, and Francis A. Winchenbach, M. D., Bath.

Councilors: S. R. Lenfest, M. D., and John Dougherty, M. D.

Committee on Legislation: Dr. Winchenbach.

Guest speakers were Frank S. Broggi, M. D., and Nicholas Fish, M. D., both of Portland.

Dr. Broggi talked on "The Practical Therapeutic Approach in Neuro-Psychiatry." He spoke on electroshock therapy and narcosynthesis in the treatment of psychoneurotic disorders.

Dr. Fish spoke on "Child Problems and Psychotherapy," discussing thumb sucking, bed wetting, tantrums and emotional states.

There were ten M. D.'s and eleven local dentists present.

NEIL L. PARSONS, M. D.,  
*Secretary.*

*Continued on page 56*

## BRONCHIAL ASTHMA

"Aminophyllin has in recent years taken a definite place in the armamentarium of asthmatic medication. Physiologically it acts by relaxing the bronchial muscles. It is also extremely valuable in relieving patients of an adrenalin fastness and is less contraindicated in cases with cardiac disorders or hypertension."<sup>1</sup>

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\*Searle Aminophyllin contains at least 80% of anhydrous theophylline. G. D. Searle & Co., Chicago 80, Illinois.

**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

1. Mountain, G. E.: Bronchial Asthma, J. Iowa M. Soc. 35:324 (Aug.) 1945.



*County Society Notes—Continued from page 54***Washington**

The mid-winter meeting of the Washington County Medical Society was held in conjunction with the St. Croix Medical Society on Friday, February 21, 1949, at the Queen Hotel, St. Stephen, New Brunswick, with twenty-two members and five guests present.

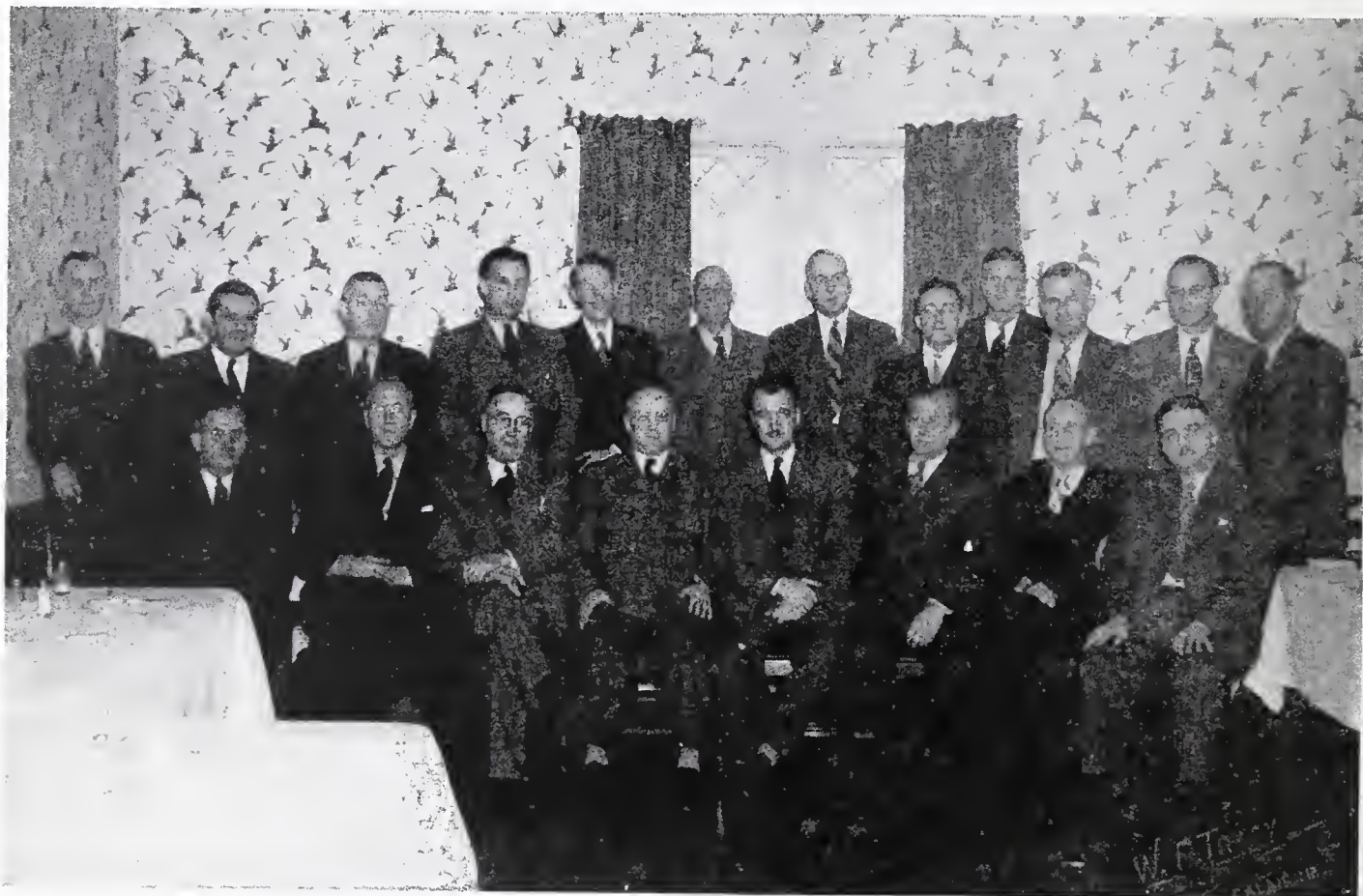
Luncheon was held at 12.30 P. M., following which Dr. H. S. Everett of St. Stephen, N. B., president of the St. Croix Medical Society, introduced Dr. W. B. Ayre of Montreal who spoke on "Cytology and Its Use in Detection of Early Uterine Cancer." His talk was illustrated by lantern slides. This was followed by a short film on the use of surface biopsy in diagnosis of early cancer of the cervix. Dr. H. S. Everett, who had recently studied under Dr. J. Ernest Ayre of Montreal, then showed several microscopic slides prepared by the surface biopsy technic.

A short business meeting was then held with Dr. W. H. Bunker of Calais, president of the Washington County Medical Society, as chairman. Fee schedule committee brought up several points for discussion. The question of a hospital number of the MAINE MEDICAL JOURNAL from Washington

and Charlotte County Hospitals was brought up for discussion. It was voted to sponsor the September, 1949, issue of the MAINE MEDICAL JOURNAL with each member writing an article by himself or in collaboration with others. A committee was appointed to choose the best papers for the JOURNAL with Dr. S. R. Webber of Calais as chairman, assisted by Dr. Norman E. Cobb, of Calais, and Dr. James C. Bates, of Eastport. All papers to be in hands of committee by August 15.

Dinner was served at 5.30 P. M., following which Dr. Willard H. Bunker, president of the Washington County Medical Society, introduced Dr. George S. White of St. John, N. B., who spoke on "Management of the Posterior Position." This was followed by a very active discussion. Next Dr. Bunker introduced Dr. George Skinner of St. John, N. B., who spoke on "Chest Surgery" and illustrated his talk by several X-rays and lantern slides. This was followed by a period of discussion.

KARL V. LARSON, M. D.,  
*Secretary.*



Members and guests attending combined meeting of Washington County Medical Society and St. Croix Medical Society, at Queen Hotel, St. Stephen, N. B., February 21, 1949.

Front row, left to right: Drs. R. MacLean, McAdam, N. B.; H. S. Everett, St. Stephen, N. B., President St. Croix Medical Society; W. H. Bunker, President Washington County Medical Society; G. H. White, St. John, N. B.; W. B. Ayre, Montreal, Quebec; G. F. Skinner, St. John, N. B.; G. W. Burton, Milltown, N. B.; R. D. Smith, St. George, N. B.

Back row, left to right: Drs. C. F. Sears, Milltown, N. B.; J. T. Metcalf, Calais; L. W. Brownrigg, St. Stephen, N. B.; H. G. Mitchell, Calais; John Kazutow, Machias; E. O. Thomas, St. Stephen, N. B.; S. R. Webber, Calais; K. V. Larson, East Machias; Elmer Stuart, St. Andrews, N. B.; E. Stiles, St. Stephen, N. B.; C. W. Capron, Calais; N. E. Cobb, Calais.

York

The annual meeting of the York County Medical Society was held at the Henrietta Goodall Hospital, Sanford, Maine, January 12, 1949.

The following officers were elected for the coming year:  
President, J. Robert Downing, M. D., Kennebunk.  
Vice-President, William F. Mahaney, M. D., Saco.  
Secretary-Treasurer, Charles W. Kinghorn, M. D., Kittery.

Delegates to the Maine Medical Association: James H. Macdonald, M. D., Kennebunk; C. W. Kinghorn, M. D., Kittery, and Carl E. Richards, M. D., Sanford. Alternates: Paul S. Hill, Jr., M. D., Saco; William F. Mahaney, M. D., Saco, and Edward W. Holland, M. D., Sanford.

Board of Censors: H. Danforth Ross, M. D. (1949), William T. Roussin, M. D. (1950), John J. Murphy, M. D. (1951).

Committee on Resolutions: Owen B. Head, M. D., H. D. Ross, M. D., and J. R. LaRochelle, M. D.

Eugene H. Drake, M. D., of Portland, spoke on Prepaid Medical Care. Mr. W. Mayo Payson, Executive Secretary of the Maine Medical Association, spoke on the A. M. A. \$25.00 assessment.

A committee was appointed to investigate Group Insurance.

James Marvin Baty, M. D., of the Pratt Diagnostic Clinic, Boston, gave a most interesting talk on "Nephritis."

C. W. KINGHORN, M. D.,  
*Secretary.*

New Members

Kennebec

John D. Southworth, M. D., Veterans Administration, Togus, Maine.

NOTICE

Veterans Administration Warns Against Writing Unauthorized Prescriptions

Lorrimer M. Schmidt, M. D., Chief of the Out-Patient Division of the Veterans Administration Center, Togus, stated today that his office had recently received instructions from the Veterans Administration Central Office in Washington, D. C., to the effect that the Government must bill local physicians for the amount of any prescriptions they write for veterans without proper authorization to treat such veterans for service-connected disabilities.

Dr. Schmidt pointed out to all physicians that under the "Home Town Plan" for treatment of veterans as set up by the VA, fee-basis physicians may write prescriptions in connection with their treatment of veterans' service-connected conditions, provided authorization for that treatment has been granted by the VA. He also revealed that his office has received from Maine pharmacists requests that the VA pay for prescriptions written by fee-basis physicians without proper authorization. In some cases, the physician writing

the prescription had received an authorization from the VA to perform a pension examination on the veteran but no authorization to render treatment. In other cases, the physician had received authorization to treat the veteran for his service-connected condition and had written a prescription for a condition other than a service-connected one. In still other cases, the physician has written a prescription before authorization was granted to treat the veteran.

Dr. Schmidt stressed that the VA has no recourse other than to bill the physician for the amount of the improper prescription. He emphasized that the VA in no wise criticized the excellent care which "Home Town" physicians are giving veterans in Maine. He urged them to make sure that proper authorization is received from the VA before writing prescriptions for veterans in order that any embarrassment may be avoided.

BOOK REVIEW

**"Occupational Marks and Other Physical Signs"**  
A Guide to Personal Identification, by Francesco Ronchese, M. D. Grune & Stratton, New York, 1948. 181 pp., 151 illustrations. \$5.50.

Dr. Francesco Ronchese, of Providence, R. I., Dermatologist in Chief of the Rhode Island Hospital and Assistant Professor of Dermatology, Boston University School of Medicine, has made a distinct contribution to a rather undeveloped branch of dermatology and forensic medicine with this study of marks left on the human body by trades, professions, hobbies, diseases, X-ray treatments, etc. While the author, because a dermatologist, is especially interested in skin changes, he does give consideration in this book to all the structures of the body influenced by the vocations and avocations of man.

The gathered data which is the result of years of observations, represents a wealth of information and a valuable addition to the field of criminal investigation, particularly in regard to personal identification. It is, of course, a book which every general practitioner, dermatologist and coroner can read with interest and profit.

Dr. Ronchese reminds us that fingerprints may fail to identify in a percentage of cases larger than is usually believed. Leprosy, for instance, may completely destroy the papillary lines, which may return to normal if the leper responds to therapy. The papillary lines so useful in fingerprint identification may be temporarily destroyed in chronic eczema of the hands. Identification often remains an unsolved problem not only in the criminal and the dead, but also in the amnesic.

In some places Dr. Ronchese's book reads like a detective story, interesting to the dermatologist, the medico examiner and the student of human activity. Apparently almost every occupation has its story to tell in the markings it leaves. Dr. Ronchese lists and describes the many identifying skin markings,—callouses, scars, warts, tattoos, a pigmentation, and the sequelae left by too much X-ray. He gives a long list of occupations that produce characteristic marks but also points out that the absence of such markings is of no diagnostic value because of the increasing use of protective devices and labor saving machinery. For those who like to know about landscape gardener knuckles, granite cutter rings, reel fisherman moles, the skin irritations of the painter, the barber and



the tailor, saxophone player bumps, the burns of the welder and the foundry worker, the cut and worn finger tips of the jeweler and the florist, the wart like palms of the file worker, the scars of the cocaine addict and the callouses of the surgeon,—the writer's description is an interesting story.

Pseudo-occupational marks are discussed, like common dry eczema (*eczema fissum seu raghadiforme*) often labeled "dish water hands" and its total or partial non-compensability. The diagnostic value of several nail conditions as a sign of past or present internal or external disease is questioned.

The book is rich in undiluted value. The text is concise and to the point. The reader is impressed by the profusion of excellent illustrations (151 and 2 in color) enhanced by a unique feature, the use of pen and ink diagrams showing more

clearly than actual photographs can, the position of the hands or the body in the performance of the act producing the mark on the skin.

The index, always an important part of every medical book, is well done. It has a large bibliography. The book is highly recommended to the dermatologist, the general practitioner and to the criminal investigator. It shows that in a proper coroner's office set up, there is a place for the dermatologist who is an expert in occupational marks. Dr. Ronchese has given us some new and interesting information in his book "Occupational Marks and Other Physical Signs."

ADRIAN H. SCOLTEN, M. D.,  
Portland, Maine.

### *Clinico-Pathological Exercise—Continued from page 48*

Diverticulitis can be eliminated because of lack of spasm in the X-ray findings and because diverticuli of the ascending colon are rare.

Solitary ulcer of the large bowel is possible, but if this had perforated, we should have an increase in temperature and white blood count, and a more acutely ill patient.

Foreign body with perforation can be eliminated on the history.

I feel that she has a granulomatous lesion, and I will put first: Actinomycoses; second, lues; and third, retroperitoneal tumor.

*Dr. Isaac Webber:* I do not think you would have palpated carcinoma.

*Dr. Porter:* Have you ever seen a carcinoid of the colon by X-ray?

*Dr. Eugene McManamy:* I would like to ask Dr. Russell where the filling defect is in the X-ray?

*Dr. William Russell:* I think that it is here in the cecum.

*Dr. Webber:* What part of the intestinal tract is that?

*Dr. Walter Russell:* In the cecum. I cannot explain it. It has a small amount of barium in it, but perhaps the flecks inside do not mean as much as the

shadow itself. It is only on the one film and is not repeated.

*Dr. Asali:* Actinomycoses are apt to be adherent to the abdominal wall.

*Dr. McManamy:* The mass is freely movable with the colon.

*Dr. Webber:* I do not see how he could rule out diverticulitis of the cecum or carcinoma of the colon.

*Dr. Russell:* I do not see a diverticulum demonstrated on that film. I go with diverticulitis.

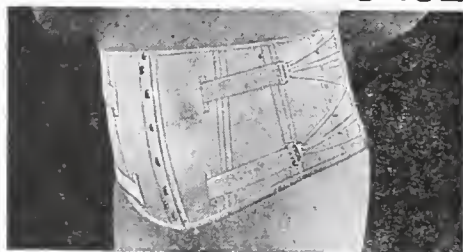
*Dr. Ralf Martin:* No one has mentioned appendicitis. Wouldn't it be a huge one if it were her appendix?

*Dr. Russell:* Isn't that lesion too high for an appendix?

*Dr. Lawrence Holt:* Over 95% of the cases of diverticulitis with complications are limited to the rectum and sigmoid.

*Dr. Porter:* The specimen removed at operation consisted of terminal ileum and ascending colon. There was a diverticulum that had perforated on the right side of the cecum and measured 7 to 8 cm. There was, in addition, a polyp which can be seen in this X-ray. The pathology, therefore, consisted of ruptured diverticulum of cecum with resulting abscess formation.

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# The Journal of the Maine Medical Association

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## ANESTHESIA IN THE HYPERTENSIVE PATIENT\*

GILBERT CLAPPERTON, M. D., Lewiston, Maine

Clinical experience has shown that patients who have hypertension uncomplicated by congestive heart failure, coronary occlusion, renal insufficiency or cerebral vascular accidents, are not increased risks for anesthesia of any type.<sup>1</sup> It is when the aforementioned complications exist that the maintenance of blood pressure may be of vital importance, and the anesthetic risk to the patient is increased. It is true that blood pressure does fluctuate in hypertensive patients during their normal daily routine, however they do not tolerate extreme changes. Extreme changes may occur during anesthesia, though the disabling or fatal results may not be evident until the period of anesthesia is well over and the anesthetic management escapes blame when surely it played a part.

Accidents which are due to an increase in blood pressure during anesthesia are fortunately uncommon though by no means unknown. Such accidents are rupture of a blood vessel and acute cardiac dilatation.

On the other hand, accidents due to decreased blood pressure are more common in the hypertensive group and constitute a real added risk. It is not always possible by clinical and laboratory methods to ascertain the true status of the hypertensive patient's cardiovascular system and it is often in this group

that the often fatal results of hypotension occur. Coronary thrombosis, cerebral thrombosis, or congestive heart failure may result from a period of marked hypotension due to the slowing of blood flow through the coronary and cerebral vessels and hypoxia of the myocardium.

### *Preanesthetic Period*

The success of an anesthesia depends not only upon the proper selection of the anesthetic agent but also upon the proper preliminary medication. This point cannot be emphasized too strongly in the management of hypertensive patients who as a rule are more resistant to anesthesia than those with a normal range of pressure. Hypertensive patients often when given inhalation agents will exhibit marked excitement stages during which the blood pressure may reach dangerously high levels, unless proper and adequate preliminary sedation has been given. Fear and apprehension are the two most important factors causing excitement and elevation of blood pressure and should be dispelled before the induction of any form of anesthesia.

### *Induction Period*

It is during this period of inhalation anesthesia that physical activity may be encountered accompanied by elevations of blood pressure. Such manifestations

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\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.



are due to: (1) inadequate premedication, (2) prolonged high concentration of nitrous oxide resulting in anoxemia, (3) allowing the accumulation of excess carbon dioxide as an aid to rapid induction.

Five to eight c.c. of a 2½% solution of Pentothal Sodium given immediately before the induction of inhalation anesthesia will as a rule obviate any excitement.

Hypertension is commonly quoted as a contraindication to the use of nitrous oxide. The rise in blood pressure that may occur is not due to the gas itself but to the effects of excitement and oxygen want.<sup>2</sup> Nitrous oxide should never be administered in concentrations over 80%. The combination of Pentothal Sodium and nitrous oxide in concentrations of 50-70% offers the hypertensive patient a form of anesthesia free from the excitement stage, adequate oxygenation, minimal disturbance of blood pressure, and is suitable for minor operations or those requiring little relaxation.

The addition of epinephrine to local anesthetic solutions should be employed with caution if at all in hypertensive patients, because of its vasopressor effect and possibilities of provoking cardiac arrhythmias and coronary occlusion.

#### *Maintenance Period*

The two most common causes of excessive rises in blood pressure during the maintenance of anesthesia are hypoxemia and carbon dioxide excess. Hypoxemia occurs when the oxygen in the inspired atmosphere is below twelve percent.<sup>3</sup> It may occur when there is insufficient hemoglobin to transport the required oxygen. Hypoxemia manifests itself first by an increased heart rate followed by a rise in blood pressure.

Carbon dioxide increase in the alveoli during general anesthesia occurs when prolonged rebreathing takes place. An increase in the patient's blood pressure and accompanied increase in depth of breathing should make one suspicious of carbon dioxide excess.

There must be at all times a free exchange of both oxygen and carbon dioxide. Obstruction, partial or complete, to the exchange of these gases at any point

from the lips and nares to the alveolar membrane, will result in both hypoxemia and carbon dioxide excess. No form of obstruction, no matter how slight, should be permitted to continue in the hypertensive patient.

It is not the purpose of this paper to discuss all the causes of hypotension during anesthesia. Surgical shock, blood loss, spinal anesthesia, prolonged or deep general anesthesia or combinations of these are but a few of the common causes. The dangers of a period of hypotension in the hypertensive patient have already been mentioned.

The treatment of hypotension during anesthesia depends upon the etiology. Early recognition of the trend toward an unfavorable turn of events by the anesthetist will enable him to remedy the situation before serious consequences take place. If due to anesthesia carried too deep it should immediately be lightened. The use of vasopressor substances such as ephedrine or neosynephrin prior to and during spinal anesthesia will often avert an episode of hypotension.

Vasopressor substances have no place in the treatment of hypotension as the result of prolonged deep anesthesia, blood loss, or surgical shock. Infusions of whole blood or plasma are the basis for such treatment, taking care that the rate of administration does not overload a weakened myocardium.

#### SUMMARY

Patients with hypertension uncomplicated by vessel, myocardial, and renal changes are not increased anesthetic risks.

Accidents due to periods of hypotension under anesthesia are more common than those due to increased blood pressure.

The management of the hypertensive patient during the three periods of anesthesia has been discussed.

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- (3) Haugen, F. P.: Current Researches in Anesth. and Anal., 22:3, 152, May, 1943.

In the treatment of pulmonary tuberculosis, complete bed rest is the foundation upon which the physician builds. In addition to this, collapse therapy of various kinds is used to provide local rest to some portions of the lung to initiate healing of the diseased process, to correct an unfavorable mechanical situation such as the presence of a cavity in the lung

parenchyma, or to speed up the healing process. With the addition of collapse therapy one may shorten the time of complete bed rest, allowing the patient to be ambulatory and return to a productive occupation at an earlier date. — Harold Guyon Trimble, M. D., *Am. Rev. Tuberc.*, May, 1948.

## UROLOGICAL ASPECTS OF HYPERTENSION\*

JOSEPH MEMMELAAR, M. D., Bangor, Maine

The urologist attempts to treat hypertension by removal of the Goldblatt kidney. The Goldblatt kidney, however, is rather a rare occurrence. Probably on record, there are less than fifteen authenticated cases.

Back in the latter part of the 19th Century, the association of the kidney with hypertension was first recognized, and, since that time, rather extensive work has been done which finally gives the relationship between pathology of the kidney and hypertension.

In about 1934, Goldblatt published his work on the unilateral atrophic pyelonephritic kidney. That is the true Goldblatt kidney, so-called, and he showed that this particular type of kidney caused hypertension. Since that time, enthusiasm has become rather great, and nephrectomy was done rather frequently in the treatment of hypertension. But, as I have stated, there are probably on record less than fifteen authenticated cases of Goldblatt kidney.

There are roughly, three criteria before this diagnosis should be made.

1. It should be unilateral, and the pathology is a pyelonephritis, which has progressed to the stage of atrophy. This kidney is usually functionless.

The patient is usually below fifty. And, to substantiate that this actually was a Goldblatt kidney, time has to elapse, as much time as probably a year, and the blood pressure must be checked following nephrectomy for at least a year, because we are all acquainted with the fact hypertensives, when put to bed, will have a fall in blood pressure, and especially after a major surgical procedure, so that unless followed for a year, one cannot be sure that the kidney removed was actually of the Goldblatt type.

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.

One thing should be strongly emphasized. Streptomycin is not an overnight cure-all for tuberculosis. Like other valuable drugs, such as penicillin and sulfonamides, it has its assets, limitations and liabilities. It must not be considered as a substitute for sanatorium care, rest in bed and other well established methods of treatment, such as collapse therapy and other surgical procedures.—Karl H. Pfuetze, M. D., *Dis. of Chest*, Sept.-Oct., 1948.

There are other kidney conditions which are associated with hypertension, but it is not in my realm of endeavor to discuss these. Among these, of course, you will find acute glomerular nephritis, and the acute nephrosclerotic kidney.

The practical significance, as far as the urologist, or rather the internist who is searching for the cause of hypertension, is concerned, in a person below fifty, would be to include in this investigation a study of the kidneys, and this, probably, could best be done by the intravenous pyelogram, because this investigation includes a split function of the kidney, as well as a picture of kidney pelvises. If, at this time, you find one kidney which is small, atrophic, and the patient is below fifty, one may assume he is dealing with a Goldblatt kidney. This patient may reasonably be subjected to nephrectomy. After fifty years other metabolic factors play a major role in the production of hypertension. One year or more will have to elapse before adequate proof of diagnosis may be claimed.

Now, there are bilateral, pyelonephritic, atrophic kidneys, which you find with hypertension, and, of course, these are not a surgical problem. Very often, at an earlier date, a unilateral pyelonephritis was present, but it wasn't discovered in time, and so the other kidney became involved through the effect of hypertension on the vascular tree.

So that the only parting remark I should like to make or to give you would be that any patient below fifty, who has hypertension should be studied, and the study should include a urological study, and the aim should be to find the small, atrophic, pyelonephritic kidney, without any other cause of hypertension; this particular subject, then, should be given the benefit of nephrectomy, followed very closely for over a year, to determine whether or not it was a true Goldblatt kidney.

Pulmonary tuberculosis in the old is usually of insidious onset and may be completely masked by other disabilities, or often ignored until either an intercurrent illness or a sudden increase in activity of the tuberculosis leads to an illness which may, even at this stage, be treated as nothing out of the ordinary in an aged person. In such cases pulmonary changes may be gross before tuberculosis is diagnosed.—F. J. Hebbert, M. D., *The Lancet*, Aug. 14, 1948.



## CARDIAC ARREST WITH RECOVERY: A CASE REPORT\*

MAGNUS RIDLON, M. D., ROBERT FEELEY, M. D., CLEMENT S. DWYER, M. D., Bangor, Maine

Cardiac arrest during operation or anesthesia is an unusual and frightening experience. Although most physicians believe this accident extremely rare, it is said to occur about twice a year in a busy operative clinic.<sup>1</sup> Reports have repeatedly appeared in the literature in the last few years emphasizing the fact that cardiac standstill can often be effectively treated provided the diagnosis is quickly made and a planned regimen of therapy is carried out.

We have recently successfully treated a patient with sudden cardiac arrest during operation. A report of this case follows:

### CASE REPORT

On 8/25/48, a twenty-five-year-old female was given spinal anesthesia for appendectomy, left salpingectomy and right salpingo-oophorectomy. Hypnosis was maintained with intravenous pentothal sodium. Preoperative examination was negative, except for a slightly enlarged liver. The blood pressure was 120/80. Hgb. was 13.0 gm., the urine was negative. Premedication consisted of Nembutal gr. 1½, Morphine Sulfate gr. 1/6 and Scopolamine Hydrobromide gr. 1/150. The pre-anesthetic blood pressure was 110/70. 15 mg. Pontocaine qs ad 3.5 c.c. with 10% glucose was administered intrathecally after the intramuscular injection of 50 mg. ephedrine. Analgesia was present to T-5. An intravenous infusion of 5% dextrose in water was started at the right ankle. During operation the blood pressure ranged from 110/70 to 100/60 and the pulse ranged from 80 to 90. Respirations were excellent and the color was pink. Forty-five minutes after the administration of the anesthetic as the omentum was replaced in the pelvis and just before beginning to close the peritoneum, the anesthetist noted that the patient had suddenly become pale and cyanotic. About five seconds later, the surgeon stated that the blood in the operative field had become dark. Respirations had ceased and the carotid and aortic pulses were impalpable. The heart beat could not be felt through the diaphragm. A pharyngeal airway was inserted and artificial respiration by the anesthesia apparatus was begun. The heart could not be heard by stethoscope. Attempted cardiac massage by the transperitoneal subdiaphragmatic method was begun. Twenty mg. of desoxyephedrine was injected intravenously. By this time the heart had been in standstill for about three minutes and the unsatisfactory cardiac massage

had not cleared the mottled blue-gray color of the skin. At this point 0.5 c.c. of 1:1000 epinephrine was injected through the fifth left interspace, probably into the ventricle. No pulsations could be felt on inserting the needle. In about three seconds, an excellent pulse was felt at the carotid artery. The rhythm was apparently bigeminal. The blood pressure was 120/80. After about three minutes the pulse resumed a regular rhythm at about 100/min. The color of the skin rapidly became pink and the operation was completed. Artificial respiration was continued for about fifteen minutes when automatic respiration was gradually resumed.

The patient was returned to the ward where she was placed in an oxygen tent. After three hours she became extremely restless but was still unconscious. Because of the persistent unconsciousness, respiratory depression and cyanosis, 12 gm. of sodium succinate was given intravenously with marked improvement in color and in the rate and depth of respirations. After about six hours extensor rigidity was noted, especially in the upper extremities. About fifteen hours postoperatively she awakened.

8/26/48. Vision was hazy and she could not recognize people. She could see fingers. She complained of extreme fatigue and severe headache, probably due to cerebral edema. Speech was halting and slow. Memory for recent events was very defective, though memory for distant events was good. She could not remember an intravenous infusion being given or who had given it. She would repeat questions over and over. Spasticity improved but the left arm remained rather rigid until late afternoon.

8/27/48. By this morning speech was less halting but still slow and vision was clear. The spasticity was entirely gone but the left biceps and left patella jerks were hyperactive. There were no abnormal reflexes.

8/28/48. The patient stated that she was taking interest in the other patients for the first time since operation. Speech and reflexes were normal. Memory for recent events remained defective.

9/3/48. Recent memory was improved but still defective.

9/14/48. Discharged. The recent memory defect had disappeared, except for a loss of the twenty-four hours before operation. Her relatives stated that she appeared mentally and emotionally normal.

### COMMENT

Cardiac standstill had occurred with practically all methods of anesthesia, with all types of anesthetic

\* From the Departments of Surgery and Anesthesia, Eastern Maine General Hospital, Bangor, Maine.

drugs and during a great variety of operative procedures. The exciting cause of this reaction had been the subject of much speculation. Nicholson<sup>2</sup> has stated that reflexes under any light anesthetic may be responsible for cardiac arrest and cites two interesting cases. In the first, pulling on the mesentery and in the second, manipulation of the throat while the patients were "not well under" apparently precipitated reflex cardiac arrest. Lampson et al<sup>3</sup> emphasize that most reported cases occurred during light anesthesia in either the induction or recovery phase when the myocardium is more irritable than normally. Some observers believe that vagal reflexes from the neck, chest or abdomen, etc.,<sup>4, 5</sup> may exert a powerful inhibitory effect upon the heart especially under certain anesthetics, such as cyclopropane or pentothal sodium, which tend to enhance these reflexes.<sup>6, 7</sup> In our case, the replacement of the omentum in the pelvis may have precipitated the accident. Others<sup>1</sup> have suggested that hypoxia may lead to increased irritability of the myocardium with ensuing ventricular fibrillation and standstill.

The treatment of cardiac standstill is still controversial, but all authors agree that sterile syringes and needles, emergency drugs, intravenous fluids, oxygen and a machine for resuscitation should be immediately available. Some keep a sterile thoracotomy set on hand at all times. Bailey<sup>8, 9, 10</sup> advises that a time-keeper be assigned to count aloud the half minutes as they pass during treatment. Each minute of therapy is planned leading from the simpler measures to the more radical. However, with his plan valuable time may be wasted before the most effective procedures are instituted.

Certain definitive therapeutic procedures may be listed:

(1) Artificial respiration with oxygen: The airway must be clear. An endotracheal tube should be inserted if an adequate airway cannot be maintained but time should not be spent on needless intubation. Artificial ventilation with oxygen should be started at once. Thompson et al<sup>11</sup> have demonstrated that all methods of artificial respiration cause a slow circulation of blood throughout the body. A positive and negative phase resuscitator is the most efficient in producing a circulation but the ordinary anesthesia apparatus is satisfactory. Lacking this, manual compression of the chest is adequate.

(2) Cardiac Massage: Cardiac massage at about 40 times per minute is usually the most effective measure of treatment and must be started at once. There are three routes by which cardiac massage may be performed.

(a) Transperitoneal subdiaphragmatic: With this approach the right hand is placed against the diaphragm and the heart is massaged by compressing it

against the chest wall. In our case, the surgeon felt this method unsatisfactory because the heart could not be clearly defined and compressed. Lahey<sup>12</sup> has stated that this massage is "not more than a tickle."

(b) Transperitoneal transdiaphragmatic: A button-hole incision is made behind the xiphisternum between the attachments of two sides of the diaphragm. The thumb of the right hand is placed through this opening and the heart is compressed between the thumb and the four fingers beneath the diaphragm.

Bailey prefers to sever the attachments of the diaphragm along the left costal margin and to massage the heart in the right hand if transperitoneal subdiaphragmatic massage is unsatisfactory.

(c) Transthoracic: A transverse incision is made through the left third or fourth intercostal space anteriorly. The cartilage above and below are cut and the ribs widely retracted. The heart may then be massaged under direct vision and drugs may be easily be applied to it after opening the pericardium.

The transperitoneal methods are indicated when the abdomen is open. If there is a choice of methods, the transthoracic approach is probably preferable.<sup>1, 3</sup> However, in smaller communities, where a surgeon may be entirely unfamiliar with thoracic surgery, he may waste valuable time before attempting emergency thoracotomy. In such a situation, it would be more reasonable for him to proceed through the familiar territory of the peritoneal cavity, and use either of the transperitoneal methods which proves satisfactory.

(3) Drug therapy: A great variety of drugs has been employed in attempted cardiac resuscitation. Intravenous therapy is of little or no value, unless massage is effective in restoring the circulation, since the drugs so administered may not reach the heart. Intracardiac epinephrine has been condemned because it may induce ventricular fibrillation. Bailey states that he has never seen epinephrine alone revive a heart which has stopped but that it will strengthen the contractions of a weakly beating heart. However, Beecher<sup>13</sup> has recently reported two cases in which cardiac massage alone was unsuccessful but in which intracardiac epinephrine was instrumental in resuscitating the heart. It was evident in these cases that the prick of the needle alone was without value. Lampson et al insist that an exact diagnosis of cardiac standstill or ventricular fibrillation must be made by visualization of the heart before the administration of drugs. Epinephrine is strictly contraindicated in the latter, whereas procaine may be of great benefit.

Usually 0.5 c.c. of 1:1000 epinephrine is injected into an auricle if possible. The dose may be repeated

*Continued on page 65*



## SURGICAL ASPECTS OF HYPERTENSION\*

GEORGE L. MALTBY, M. D., Portland, Maine

I want to speak just briefly regarding the surgical therapy of hypertension. I think that it is interesting to note, first of all, that I am at the end of this symposium, and secondly, that two years ago Dr. Smithwick spoke here with great enthusiasm about the surgical treatment of hypertension. The same year, Dr. Max Peet spoke with equal enthusiasm. I think that if either of these men were speaking today, they would be a little less enthusiastic about the surgical treatment of hypertension. Maybe in two years more, we will slide off the bottom of this symposium, but I don't believe so. I think that we are just swinging back to a mid-point where we really can understand some of the indications for the surgical treatment of hypertension, and perhaps pick our cases a little more carefully.

First, there are five things that you should realize about the surgical treatment of hypertension, before we go into any of the methods of selection of these patients.

The operation itself is by no means a rational or physiological procedure, but neither is a thyroidec-tomy. It does work in a great many cases.

The second point is that seldom, following the operation, in a year or more, is a manometric cure accomplished.

However, the third point that must be realized is that following this operation for hypertension, the majority of the patients are apt to have spectacular relief of the signs and symptoms of hypertension.

The fourth point is that the results are very frequently unfortunately temporary.

And fifth, the treatment is violent. We don't know the cause of hypertension, and therefore, any treatment, medical, surgical or otherwise, is empirical. We know one fact, that peripheral resistance is one of the important factors, and the surgical approach is an effort to lower peripheral resistance, and that is all it is.

There is an argument between the authorities in the field as to whether the extensive sympathectomies being done do not have a humeral effect. Is there some change in the humeral output of renin, or changes in the blood stream itself, and, is that what we are accomplishing by the surgical treatment?

I think there is a certain amount to be said for this, inasmuch as even in the patients who have a temporary lowering of the blood pressure, the blood

pressure returns to a rather high level, and in a great majority of those patients they will still be relatively free of both signs and symptoms which may be serious and which we worry about in the course of the hypertension.

So that if we remember those five things about the surgical treatment, we can go ahead and try to select what patients should be operated upon or should have surgical treatment of their hypertension.

In the past, we have gone through a battery of tests. They have been called the Peet system or the Smithwick system or some other system, but they all basically have been an effort to find out the lability of the blood pressure. There have been cold pressure tests, sedative tests, the use of some of the newer drugs.

Then, of course, it is terribly important to evaluate the cardiac and kidney functions by the usual tests.

All of these things have been stressed.

I think that a great many of the medical men and some of the surgeons are swinging away from the tests for the lability of the blood pressure for the evaluation of what the end results are going to be. They just haven't checked up. Some of the patients with extreme responses to sodium amytal and cold pressure tests have done extremely poorly, and other patients, according to the standards brought up two or three years ago, had very little response, but especially in Dr. Peet's service they were done anyway, and some of them had amazingly good, at least symptomatic results.

And so I think that the whole thing is very confused, and I think that the indications are still quite indefinite.

There has been one argument brought up, that, if the blood pressure doesn't go down, and these patients are better we are only doing violent psychotherapy. But, that doesn't quite fit in, either, because I don't know of any psychoneurosis where almost 95 per cent would respond immediately, symptomatically, to treatment, and most of these patients who have no symptoms after the operation, whether the blood pressure is down or not, are usually glad they have had the operation, which is not true in the most severe psychoneurotics, no matter what you do.

I think that the patients should not be selected solely on the basis of the blood pressure fluctuations, which have certainly proved unreliable. And, it is the feeling, I think, of most men now who are carrying out surgical attack on hypertension that the pro-

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.

cedure should be reserved for these patients with disabling symptoms and those patients with early malignant hypertension. I know in certain instances that the operation can be a life-saver, in patients who are orthopneic, or decompensated, and who have had the whole gamut of medical treatment and the rice diet.

I don't think that there is any excuse for rushing into the operation until everything else has been tried. It should be a last resort.

In our small series, I have seen numerous cases in which I am very sure the procedure has saved the patient's life, and some of them on our service have gone over two years, and we don't know how many more years we may have added to their lives.

There is also a group that has been reported in the obstetrical field which has been very satisfactory in treating very severe essential hypertensive patients during pregnancy, with apparently excellent results, and getting both a live patient and a live baby, and having these patients do extremely well.

I do not want to seem too pessimistic about the surgical treatment of hypertension, but, on the other hand, I think that we have got to face the fact that it hasn't been the great panacea that we thought it was going to be a few years ago. Some of us thought that it was going to be the complete answer. Yet, I think

that it has a very definite place in the total armamentarium of the total treatment of hypertension.

There are a few points in closing that we should reiterate, perhaps, which should place less reliance on the prediction tests, especially those of the blood pressure.

Again, this operation should be reserved for those patients with severe symptoms, but with no gross impairment of cerebral, cardiac, or renal function. It doesn't necessarily rule out the patients who have a cerebral accident and who have gotten nowhere, nor the patients with two or three or more attacks of cardiac decompensation. I think that some of those patients properly need surgery, if they are not doing well under a medical regime.

This operation certainly should not be done on young individuals with mild hypertension. A great many have been done in the past, and most of us are swinging away from that. It may be done in the older age groups, and I am sure that in some of those that are seriously incapacitated and desperately ill from hypertension, anywhere from three to ten years can be added to their lives.

Finally, the patient should be told, on the whole, as far as we know about this operation, that it is a palliative operation and not curative.

Cardiac Arrest With Recovery—Continued from page 63

if necessary. In our case, the administration of this agent (probably into the ventricle) was apparently the procedure which induced forceful ventricular contractions and led to the survival of the patient.

Since it is generally believed that the hypoxic ventricular myocardium often fibrillates before standstill and because the differential diagnosis between fibrillation and true arrest is usually not certain, many feel that 1 or 2% procaine should be given alone or along with the epinephrine.<sup>1,3</sup> It may be injected into the ventricle or, if the heart is exposed, the pericardium may be filled with the solution to bathe the entire heart. Procaine acts as a depressant to the irritable or fibrillating myocardium.

SUMMARY

A successfully treated case of cardiac arrest during operation under spinal-pentothal anesthesia is presented. The possible precipitating factors and immediate treatment of this accident have been discussed.

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## CLINICO-PATHOLOGICAL EXERCISE

## Case presented at the Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

This is the case of a 59-year-old white male, who was admitted with a chief complaint of abdominal pain and anemia. The patient's occupation was that of a receiving clerk. Five years before admission he had influenza, from which he made an uneventful recovery. However, 5 weeks thereafter he was seen by a doctor and told that his blood was very low. It was built up in three months, and he was able to return to work. Four years before admission his blood went down again, and was again brought back to normal. One year before admission he was in another hospital, and received two transfusions. At time of release from the hospital the hemoglobin was 50-60%; less than two weeks thereafter it was down to 26%. Liver injections were then started, and he received these all the succeeding winter, the hemoglobin rising as high as 80% at one time. During this year he had had intermittent abdominal pain, but he passed it off as merely indigestion. The bowels had been regular, without laxatives; stools were normal, except when he was taking the liver injections. He had no urinary symptoms; there had been no weight loss in the previous two years. His weight was 170 lbs.; his appetite was fairly good. Except for children's illnesses, the past medical history was negative. In 1917, he had the right eye removed, following injury with a hot iron.

Family history: Father died at age 47 of typhoid-pneumonia; mother at age 65, of senility and rheumatism. There were three brothers living and well, two dead; two sisters living and well, and one dead, cause unstated. The patient had five children, all living and well.

Physical findings on admission were: General pallor of the skin and mucous membranes, and impaired hearing; no enlarged nodes in the neck; heart normal to auscultation and percussion; lung fields clear; no masses or tenderness in the abdomen; external genitalia were those of an adult male; rectal examination revealed no masses or abnormalities; the prostate was of normal size; extremities negative; neurological findings negative.

Laboratory studies: First recorded blood count showed 4.2 gms. hemoglobin; 1,700,000 red blood cells; 7,600 white blood cells, with 89% neutrophils, 11% lymphocytes; mean corpuscular hemoglobin 25; smear showed marked achromia and poikilocytosis; blood urea nitrogen 27 mg.%. The first of many transfusions was given shortly after admission. The

following day a sternal puncture was performed, the differential of which was essentially normal. A stool showed 4+ guaiac reaction. The blood count showed some response to transfusion, and reticulocyte count at that time was 7.4%. The gastric analysis showed absence of free HCl in the fasting specimen, but normal amounts in later specimens, following histamine. Fragility test showed hemolysis beginning at .48, complete at .20; the control beginning at .44 and complete at .26. The red blood cells on repeated examinations showed a slight increase; two weeks after admission they were 2,900,000. Blood smear showed similar changes as on admission, with a few nucleated RBC. seen. Urinalyses were normal. Fishberg concentration test showed concentration up to 1.020. Three weeks after admission the red blood cells were still only 2,120,000, with 6 gms. of hemoglobin, and mean corpuscular hemoglobin of 30. Stool continued to show 3+ to 4+ guaiac reaction. After seven transfusions the red blood cells were even lower, 2,030,000, with 5.8 gms. hemoglobin. At this time the total protein was 5.78 gm.%, the plasma chlorides 450 mg.%, and CO<sub>2</sub> combining power 65.5 vol.%. Shortly after admission a barium enema was performed, and showed definite evidence of a polyp involving the sigmoid. The next day a plain film of the abdomen showed a slight amount of barium remaining in the colon; the polyp was not definitely seen. The upper spine showed an area of increased density involving the right lateral portion of the body of the 4th and 5th lumbar vertebrae, with tilting of the 4th vertebra on the 5th, probably due to congenital anomaly of the 5th vertebra, with hypertrophic changes secondarily. A G.I. series was performed, showing a normal esophagus, normal stomach and duodenum; at the end of 6 hours there was still some barium in the terminal ileum. Comparison with the barium enema and G.I. series done seven and eight months previously also showed essentially normal findings. A 24-hour plate showed the whole colonic tract, but not well enough to outline the polyp previously seen. X-ray of the left femur showed no evidence of any bony change, and slight sclerosis of the femoral vessels. Anterior-posterior and lateral views of the skull showed nothing remarkable, except for calcification, extending posteriorly from the posterior clinoid processes.

On admission a proctoscopy had been performed; the proctoscope was passed 24 cm., and nothing abnormal was seen.

Four weeks after admission an operation was performed.

Further reviews of the previously-taken X-rays showed an outpocketing in the duodenum on one of the films, which was considered probably due to an incomplete filling, and not to an ulcer.

DISCUSSION

*Dr. Howard Ives:* This man has obviously had repeated episodes of intestinal bleeding. I do not think that this history can be explained in any other way. On his last admission he had seven transfusions, with no rise in the red blood cells, and one can only presume a leakage of blood from some place in the intestine fast enough to create anemia, but slow enough to prevent shock. There are multiple causes of gastrointestinal hemorrhage. Aside from the rarer conditions, we will take up the more common ones. Esophageal varices are not demonstrated by X-ray, and the history seems far too long for an esophageal varix. No liver function tests were recorded, but even without them I feel the same way. Gastric and duodenal ulcer, polyps, and benign tumors of the stomach have to be considered, but again the gastric X-rays were negative. The history is certainly too long for gastric carcinoma, although such a tumor as a gastric leiomyoma can ulcerate and give repeated bleeding over a long period of time. In the second portion of the duodenum the obvious lesions which cause bleeding are carcinoma of the head of the pancreas and of the ampulla, but again I feel the history is entirely too long to substantiate such a diagnosis. Dr. Porter has given me the information that the patient had tarry stools. I do not believe that there is a lesion in the colon, for with such extensive bleeding, I am sure that the stools would show dark blood if coming from the colon. Polyps and carcinoma of the right colon can bleed slowly, but again there is no history of change in the bowel habit, and I continue to believe that massive bleeding from the colon does not produce the usual tar stool. There are a considerable number of cases of carcinoma of the right colon which do not produce anemia, but it is one of the famous lesions that does produce anemia. With a history of this duration I am sure one could palpate a mass in the right side of the abdomen if carcinoma, as the area is one of the easiest places in the abdomen to feel a mass. Going on to chronic ulcerative colitis, there is no X-ray evidence of that, and the history is not compatible. Diverticulitis can cause repeated bleeding, and in rare cases extensive bleeding, but again the X-ray does not confirm this picture, and tar stools are not compatible with the diagnosis to my mind.

*Dr. Porter:* I saw this man at least three times in order to determine his blood count before he came

into the hospital, and his principal trouble was weakness. He complained of no pain.

*Dr. Ives:* I am forced to return to the small bowel as the focus of trouble for this man. There are various tumors, benign and malignant, that cause bleeding. I have to admit that if the bleeding is massive one can see dark red blood, and this we have all seen also in massive bleeding from a duodenal ulcer. However, shock usually accompanies bleeding of such an extent. Leiomyomas of the small bowel are common, and also have been found and reported by Dr. Walters of the Mayo Clinic in a Meckel's diverticulum. Polyps can occur at any point in the gastrointestinal tract, and can likewise cause slow bleeding. Naturally carcinoma has to be considered in the differential diagnosis, but the history does not bear out this diagnosis. I would like to ask Dr. Thaxter how often a Meckel's diverticulum can be demonstrated by X-ray?

*Dr. Langdon Thaxter:* It is probably possible, but quite rare, unless one is doing special studies for the same.

*Dr. Ives:* We know that a Meckel's diverticulum can have gastric mucosa which can ulcerate and cause bleeding. This can occur at almost any age. It is not a common condition, but obviously there must be an unusual finding in this case. I am unable to place any malignant lesion in a picture which lasts five years. Pernicious anemia has been fairly well ruled out, by the gastric acid curve, and hematological studies.

*Dr. Ives' Diagnosis:*

Repeated bleeding from an ulcer and a Meckel's diverticulum.

*Dr. Porter:* I think that this case teaches us the value of a careful history, and shows you what we try to do in selecting these cases. It is most discouraging to go over cases that come into the department and find poor histories. There is a certain amount of evidence here which leads one to the same conclusion that Dr. Ives has made. Are there any other diagnoses?

*Dr. Thaxter:* I would like to show the gastroduodenal X-rays. There is an irregularity of the duodenum, occurring in the first portion. The barium contour of the small bowel does not permit us to see a Meckel's diverticulum if present, but I do not think the X-ray is helpful to Dr. Ives from his standpoint.

*Dr. Louis Asali:* What was the highest blood urea nitrogen?

*Dr. Porter:* 27 mg.%, and one postoperatively 85 mg.%.

*Dr. Eugene McManamy:* It has been mentioned

*Continued on page 25*



## EDITORIAL

### The Nation's Health

#### A Ten-Year Program

The long expected report of the Federal Security Administrator to the President of the United States, on the National Health Conference held in Washington last May was released recently. The book of 186 pages is most interesting. Mr. Oscar R. Ewing states frankly in the foreword that "there was no agreement on the question of national health insurance and my recommendations of such a program must be clearly understood as in no way expressing the views of the Assembly. It took no position, one way or the other, on this question."

Ewing states that "every year over 300,000 people die whom we have the knowledge and skill to save. This stark fact proves that the present system is inadequate." In another portion of the report the number is raised to 325,000, these being listed as follows:

- Communicable diseases, 120,000
- Cancer and Heart Disease, 115,000
- Accidents, 40,000
- Infant and maternal, 30,000
- Other, 20,000

As would be expected in such a report, reference is made to the five million men declared physically or mentally unfit for the armed forces. This has been a favorite topic of discussion in recent years by all proponents of compulsory health insurance. These figures when broken down, do not, as many people still believe, show that inadequate medical care is responsible for the major portion of this group.

This list of deaths annually "that we have the knowledge and skill to prevent" appears repeatedly in the report, and quite obviously many people reading the report would be led to believe that under a compulsory health insurance plan these lives could be saved. There is no reference in the report to show improved statistics under the present compulsory health insurance plans in operation in other countries.

Chapter I, entitled "The Health of the Nation," starts out with this interesting statement: "During the last generation, the United States steadily im-

proved its health record, but the nation and the people will suffer losses through sickness, disability, and death, much of which is unnecessary."

The report fails to show the percentage of the 325,000 deaths which we have the knowledge and skill to save, died without medical attention, or that inadequate care was given. No comparison is made anywhere in the book of our statistical records as compared with those of other countries. According to the report we need many more physicians, dentists, nurses, and definitely more medical schools. The need for 900,000 additional beds in general hospitals is stated. These, according to the report, should cost approximately \$10,000 per bed.

In hospital construction at the present time it has been shown that the actual cost is approximately \$15,000 per bed, so instead of the nine million dollar estimate on the cost of hospital construction, or enlargement, it would be nearly 14 billion dollars under present construction rates.

The report is long but interesting, and shows definitely what is in the minds of those responsible for its appearance at this time. In the preparation of the report the administrator expresses his thanks to the members of the Executive Committee and gives the list of its members. Included in this list are the names of the President, President-Elect and Secretary-General Manager of the American Medical Association. These men gave freely of their time and knowledge in their respective presentations, and it is quite obvious that the views expressed as to the solution of the apparent present day problems in health and medical care, were not developed as a result of their statements.

This report can be secured by writing to the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., and the cost is one dollar. We would recommend that physicians everywhere secure a copy of this report and familiarize themselves with its contents.

## REPORT OF DELEGATE TO AMERICAN MEDICAL ASSOCIATION

The Second Annual Interim Session of the American Medical Association was held in St. Louis, December 1, 2, 3, 1948.

The House of Delegates met in the Kiel Municipal Auditorium, Assembly Room 2. At this time when the policies of the A. M. A. appear to have aroused some members of the Association to the letter writing stage, it might be helpful to inform you about the House of Delegates, the policy making body. Delegates to the House are elected by the constituent associations, the Sections of the Scientific Assembly, and representatives appointed by the Surgeons--General, the Medical Departments of the Army, Navy, Public Health Service and the Veterans Administration. It elects its Speaker and Vice Speaker, the Trustees and Officers of the Association. It would be difficult, it seems to the writer, to establish by any other means a body of doctors, all Fellows of the American Medical Association, who would be more representative of the practicing physicians of the Country; furthermore, it would be difficult to find an assembly anywhere in this World which conducts its business in a more open and democratic manner. The meetings are always well attended. Out of a maximum voting membership of 175 members — 170 plus are always present. These are the doctors who establish policies.

At St. Louis the House took action on two questions of great interest to the members. Bear in mind that action is not taken in haste. The two questions were: 1) Did the delegates favor and approve a resolution to establish a national organization for the purpose of forming an alliance between Blue Cross and Blue Shield organizations in order for the combined agencies to enroll "big accounts" on a national scale. Many hours were devoted to a hearing of this question before the Reference Committee. The Reference Committee recommended that the proposal be disapproved and the House voted to accept the Report of the Reference Committee; thereby voting against the proposed plan of alliance. 2) Did the Delegates favor and approve a resolution to assess every member of the A. M. A. \$25.00 for the purpose of creating a fund to be spent upon a plan to enlighten the public, by all available methods, of the accomplishments of American Medicine and the aim

of American Doctors to provide the best medical care for all the people under the present form of practice. The resolution was considered carefully by the House, discussed freely by many members, and approved without a dissenting vote. Thereby, the Delegates voted an assessment of \$25.00 upon every member of the A. M. A., the first assessment in the history of the organization.

Other important matters were considered: the House Officer situation, the Nursing Crisis, plans for improving the Scientific Assembly, methods for encouraging enlistment in the medical departments of Army, Navy and Air Corps; and plans for extending voluntary prepayment medical care enrollment. The House was busy and harmonious.

The Scientific Program was designed especially for the General Practitioner. All sections had excellent speakers on subjects of general interest. Our friend, Dr. Henry R. Viets, of Boston, is Chairman of the Committee on Scientific Assembly and has labored to have the programs at the Interim Sessions interesting and helpful to the general men.

Dr. W. L. Pressly of Due West, South Carolina (that name ought to ring a bell in the memories of Doctors Kershner and Philip Thompson, one time medical officers at Camp Sevier), received the General Practitioners' Medal.

The general registration ran far ahead of the figures at the Cleveland Session of 1947. However, your delegate found but two others registered from Maine; Doctor Fred Carter and Doctor Adrian Scolten. Allow your delegate to report that the meetings attract a large numbers of doctors from all quarters of the U. S. A., but Maine, yes New England, doesn't have a very large representation. It seems to the writer that every doctor could learn something of value if in attendance at one of the National meetings.

The next annual session will be held in Atlantic City, June 6-10, and the next interim session is planned for Washington in December, 1949.

THOMAS A. FOSTER, M. D.,  
*Delegate to the American Medical Association.*



## COUNTY SOCIETIES

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Secretary, Glidden L. Brooks, M. D., Lewiston

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## COUNTY SOCIETY NOTES

### Hancock

A regular meeting of the Hancock County Medical Society was held February 9, 1949. The meeting was called to order by the President, Dr. James H. Crowe, of Ellsworth.

Minutes of the previous meeting were read and approved.

Dr. R. H. Delafield, of Ellsworth, presented two cases of the Scalenus Anticus Syndrome.

Dr. R. V. N. Bliss, of Blue Hill, gave a talk on "The Doctor and the Hospital in 1949."

Dr. R. E. Weymouth, of Bar Harbor, stated that he was glad the Society, at a previous meeting, had voted against making payment of the A. M. A. Assessment, a pre-requisite to membership in the society, but added that he hoped all members would pay the assessment. A discussion of this subject followed — the members present being in favor of Dr. Weymouth's remarks.

Respectfully submitted,

CHARLES H. KNICKERBOCKER, M. D.,  
Secretary.

### Kennebec

A regular meeting of the Kennebec County Medical Association was held at the Augusta General Hospital, Augusta, February 25, 1949, at 6.30 P. M. The records of the last two meetings were read and approved.

Drs. H. A. Milliken of Hallowell, George J. Robertson of Fairfield, and Sabro Tashiro of Togus, were elected to membership.

The following amendment to the By-Laws, Section 1, Chapter 1, was presented:

Any member (in good standing) of any Association outside the State of Maine may apply for transfer to this County Association by filling out the necessary application form, giving his name and address, name of the school of medicine from which he graduated, date of graduation, and the date of his license to practice in the State where he is a member. This application must be signed by two members in good standing of his association.

The application may be presented at any regular meeting, to be referred to the Councilors for investigation, who shall report at the next regular meeting.

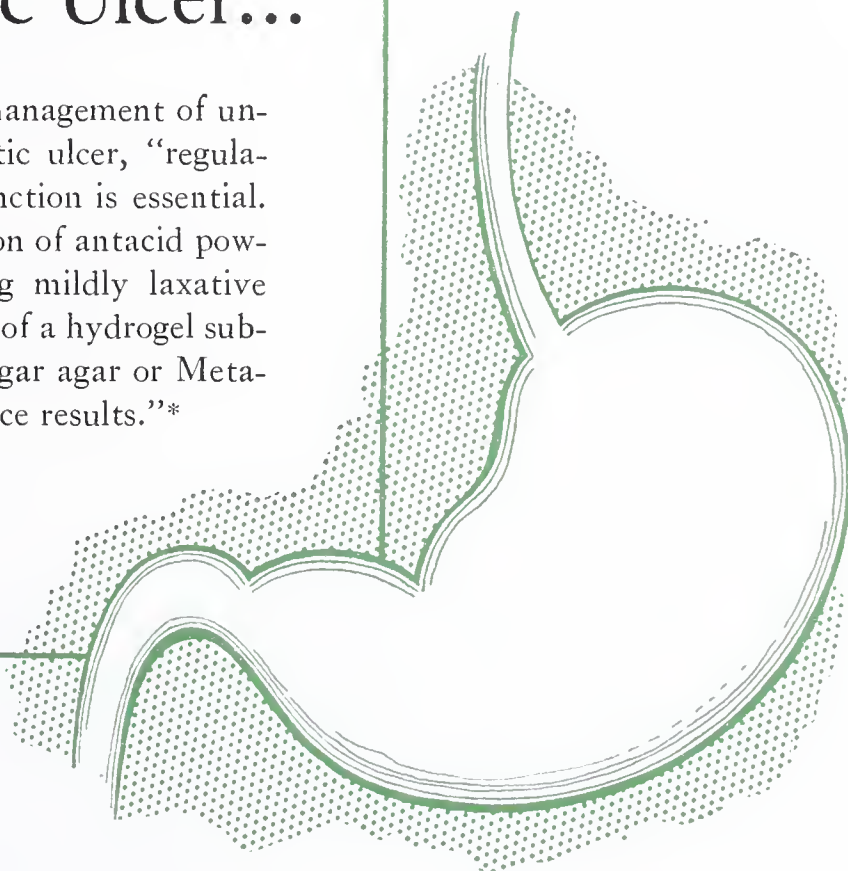
The A. M. A. assessment of \$25.00 was discussed. Mr. Payson made it clear that it was not intended to be a requirement for membership. Dr. Carter confirmed this and added that the amount could be more or less. The Society voted to approve the assessment.

Dr. Arthur T. Hertig, Pathologist of the Boston Lying-In Hospital, spoke on "The Development of the Early Normal and Abnormal Human Ovum and its Relation to the Abortion Problem." He said, in part, that many of these facts had been little studied or understood; the phenomenon of fertilization, implantation, details of abnormalities of the ovum and of the embryo, the correlation with threatened and inevitable abortion, the proportionate number of imper-

*Continued on page 72*

## Bowel Regulation in Peptic Ulcer...

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**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

\*Gerendasy, J.: Modern Treatment of Peptic Ulcer, J. M. Soc. New Jersey 43:84 (March) 1946.



*County Society Notes—Continued from page 70*

fect ova, cases that could not be saved, and cases that could be saved. An extremely informative and interesting series of lantern slides made his talk particularly valuable.

Respectfully submitted,

A. H. MORRELL, M. D.,  
*Secretary.*

### Lincoln - Sagadahoc

A joint meeting of the Lincoln-Sagadahoc Medical Society and the newly organized Dental Society was held at The Days, Newcastle, March 8, 1949. There were 11 M. D.'s and 11 D. M. D.'s present.

Dr. Philip H. Sylvester, of Newcastle, talked on "Syphilis in Prenatal Care and Infancy," and showed lantern slides of cases he has been interested in. He spoke of the older treatment with Mercury and Bismuth in contrast to the modern treatment with Penicillin.

Respectfully submitted,

NEIL L. PARSONS, M. D.,  
*Secretary.*

### Piscataquis

A meeting of the Piscataquis County Medical Association was held at the Greenville Hotel, Greenville, February 24, 1949, in honor of Dr. E. Delmont Merrill's 85th birthday.

A pleasant evening and an excellent dinner was enjoyed.

Guy E. Dore, M. D., of Guilford, was elected alternate delegate to the Maine Medical Association.

Several interesting cases were presented by members of the Association for discussion. A case presented by Dr. Francis W. Bradbury, and one by Dr. Dore were especially well presented.

Respectfully submitted,

N. H. NICKERSON, M. D.,  
*Secretary.*

### Somerset

A regular meeting of the Somerset County Medical Society was held Tuesday, February 15, 1949, at the Skowhegan House, Skowhegan, Maine. An enjoyable turkey dinner preceded the meeting which was held at 7:30 P. M.

Dr. George Robertson of the Medical Staff of the Central Maine Sanatorium, Fairfield, was the guest speaker, presenting and discussing an interesting case of "Nutritional Deficiency Anemia" in addition to giving many pertinent and informative features in the definitive diagnosis of the anemias.

In the business meeting, Dr. H. Carl Amrein of Madison, was elected to the office of Secretary-Treasurer since the present incumbent is leaving the State.

Dr. Marian S. Strickland of Canaan was unanimously elected to membership.

Twelve members were present at the meeting. Dr. Charles Popplestone, Superintendent, Central Maine Sanatorium, was a guest.

EDWIN M. LORD, M. D.,  
*Secretary-Treasurer.*

### New Members

#### Kennebec

(Admitted February 25, 1949)

Howard A. Milliken, M. D., Hallowell, Maine.

George J. Robertson, M. D., Central Maine Sanatorium, Fairfield, Maine.

Sabro Tashiro, M. D., Veterans Administration, Togus, Maine.

#### Somerset

(Admitted February 15, 1949)

Marian S. Strickland, M. D., Canaan, Maine.

#### Washington

Esmond O. Stiles, M. D., St. Stephen, N. B.

## NOTICES

### Physician Wanted at Brownville and Brownville Junction

The villages of Brownville and Brownville Junction within the Town of Brownville, are in great need of a physician.

The Town of Brownville consists of two villages, Brownville and Brownville Junction. It is located about 45 miles north of Bangor, and about 5 miles north of Milo which has a fine privately owned hospital. Brownville is served by two railroads, the Bangor & Aroostook passes through Brownville Village and the Canadian Pacific Railway at Brownville Junction. The Canadian Pacific Railway maintains divisional offices at Brownville Junction and would no doubt employ a resident physician if one was available.

Brownville Village's principal industries are B. H. Ladd, Henry Disston & Sons, Chase Mills, Inc., and U. S. Pegwood & Shank Co., all woodworking plants, having a total number of employees of about 400—weekly payroll estimated

at \$16,000. Brownville Junction's industry is the Canadian Pacific Railway which employs about 550 persons and has an estimated payroll of about \$35,000 weekly.

For further information contact—

MR. GEORGE S. WINSHIP,  
*Town Manager,*  
Brownville, Maine,  
Tel. 47.

### Department of Health and Welfare Services for Crippled Children Clinic Schedule — 1949

#### ORTHOPEDIC CLINICS

Portland — Maine General Hospital, 11.00 a. m.: Jan. 10, Feb. 14, Mar. 14, Apr. 11, May 9, June 13, July 11, Aug. 8, Sept. 12, Oct. 10, Nov. 14, Dec. 12.

*Lewiston* — Central Maine General Hospital, 9.00-11.00 a. m.: Jan. 21, Feb. 18, Mar. 18, Apr. 15, May 20, June 17, July 15, Aug. 19, Sept. 16, Oct. 21, Nov. 18, Dec. 16.

*Rumford* — Community Hospital, 1.30-3.00 p. m.: Mar. 16, June 15, Sept. 21, Dec. 21.

*Waterville* — Thayer Hospital, 1.30-3.00 p. m.: Feb. 24, Apr. 28, June 23, Aug. 25, Oct. 27, Dec. 22.

*Rockland* — Knox County Hospital, 1.30-3.00 p. m.: Feb. 17, May 19, Aug. 18, Nov. 10.

*Machias* — Normal School, 1.30-3.00 p. m.: Feb. 9, Apr. 13, June 8, Aug. 10, Oct. 12, Dec. 14.

*Presque Isle* — Northern Maine Sanatorium, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 11, Mar. 8, May 10, July 13, Sept. 13, Nov. 2.

*Houlton* — Aroostook General Hospital, 9.00-11.00 a. m.: Mar. 7, July 12, Nov. 1.

*Fort Kent* — Normal School, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 12, May 11, Sept. 14.

*Bangor* — Eastern Maine General Hospital, 1.30-3.00 p. m.: Jan. 27, Mar. 24, May 26, July 28, Sept. 22, Nov. 17.

CARDIAC CLINICS

*Portland* — Maine General Hospital, 10.00-12.00 a. m.: Will be held every Friday with the exception of holidays.

*Bangor* — Eastern Maine General Hospital, 9.00 a. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

HARD-OF-HEARING CLINICS

*Waterville* — Thayer Hospital, 1.30-3.00 p. m.: Feb. 16, June 22, Oct. 19.

*By appointment only.*

PEDIATRIC CLINIC SCHEDULE — 1949

*Bangor* — Eastern Maine General Hospital, 1.30 p. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

*Waterville* — Thayer Hospital, 1.30 p. m.: Jan. 4, Feb. 1, Mar. 1, Apr. 5, May 3, June 7, July 5, Aug. 2, Sept. 6, Oct. 4, Nov. 1, Dec. 6.

*Presque Isle* — Northern Maine Sanatorium, 1.30 p. m.: Jan. 26, Mar. 23, May 25, July 27, Sept. 28, Nov. 16.

*By appointment only.*

HOSPITAL STAFF MEETINGS

Open to the Profession

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General	1st Monday
	St. Mary's General	2nd Monday
Portland	Maine Eye and Ear Infirmary	1st Tuesday
	Maine General	2nd Friday
	Mercy	3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters	2nd Tuesday
	Thayer	Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.



*Clinico-Pathological Exercise—Continued from page 67*

that there is incomplete filling of the duodenum. Would Dr. Thaxter explain incomplete filling?

*Dr. Thaxter:* In a person who is not very thin, it is often hard to milk barium from the stomach into the duodenum, and hard to keep the duodenum filled. The colon is fairly well up, and there is some spasm of the pylorus at the time.

*Dr. McManamy:* There are one or two things that I would like to add to the diagnosis. I believe the pathology is in the duodenum, either a benign or malignant lesion. I think there is a good possibility that the diagnosis is a polyp of the duodenum.

*Dr. Ives:* How often does a polyp occur in the duodenum?

*Dr. Porter:* Very rarely. If he had a polyp in the duodenum he would probably have one in the stomach, but papillomas can occur in the second portion of the duodenum, and these of course can bleed.

*Dr. Eugene O'Donnell:* I think there are certain things to bring up in the case. Would it not be difficult to make a diagnosis of pernicious anemia when a man was under liver treatment?

*Dr. Porter:* Not with the blood as low as it was, and the normal bone marrow studies ruled out this diagnosis.

*Dr. O'Donnell:* I am sure that somewhere in the record there is evidence of the disease which the man

had, and if we looked carefully enough into the record we would find the clue. The esophagus and stomach have been studied in a satisfactory manner and appear negative. The small bowel would seem to be the area in which to look for trouble, but in view of the X-ray findings in the small bowel, which as done appear negative, the positive evidence seems to lie in the duodenum. This was noted as discussed in the X-ray interpretations, and I would favor a lesion of the second portion of the duodenum.

*Anatomical Diagnosis:*

*Dr. Porter:* The diagnosis in this case was leiomyoma of the duodenum. It measured 5 cm. in diameter, and had an ulcerated surface, which was filled with blood. Dr. Isaac Webber, the operating surgeon, considered the polyp of the colon to be of secondary value, and performed a Whipple operation. The pre-operative diagnosis was polypoid tumor of the colon. Leiomyomas of the gastrointestinal tract are quite frequent, and it is well known that they may ulcerate and bleed. I remember a case in which Dr. Shields Warren showed me an intestinal tract which contained about 20 leiomyomas.

*Dr. Thaxter:* Was the lesion in the sigmoid a leiomyoma or polyp?

*Dr. Porter:* It was later found to be a benign pedunculated soft polyp about 2.5 cm. in diameter.

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# The Journal of the Maine Medical Association

Volume Forty

Portland, Maine, April, 1949

No. 4

## COLPECTOMY — IN THE MANAGEMENT OF PROLAPSE OF THE UTERUS AND VAGINA\*

L. A. SWEATT, M. D., Auburn, Maine

Prolapse of the uterus, usually with the bladder, is one of the oldest gynecological problems noted and studied. There has been a continuous record in literature, throughout the ages, of treatment for this obvious and distressing condition. Relief, to some extent, was first obtained by non-operative procedures. Later, many operative procedures were developed. Years of experience, with many types of operations, has shown that not any one particular procedure gives the greatest relief and safety, immediate and remote, to all patients.

*First* — because of anatomical distortions.

*Second* — because of physiological inter-relationship between the various structures.

*Third* — because of the associated pathological conditions. Therefore, selective surgery should be practised in each case to get the best possible result for the patient. (References 1 and 2).

### *Purpose*

The purpose of this paper is to review statistically the cases performed, on my service, from 1939 to 1949, and the various types of operations in the treatment of all degrees of prolapsus uteri — with special attention to procidentia and to one of the least employed procedures — COLPECTOMY.

In the literature of today, there is a tendency to use the term Subtotal Colpectomy as synonymous with Colpocleisis. The closure of the vagina, as in the LeFort operation or some modification thereof, and Total Colpectomy for the more radical removal or excision of the vagina with vaginal hysterectomy, if the uterus is still present.

*Indications for Colpectomy* — References 1-2-3-4-5-6-7-8-9-11)

- 1) Extensive inversion of vagina with Procidentia of the uterus.
- 2) After hysterectomy with recurrence of prolapse with cystocele and rectocele.
- 3) After interposition operation with recurrence of prolapse.
- 4) When other more conservative procedures offer poor prospects for cure.
- 5) This operation, either total or subtotal, should only be done in the more aged women in whom the marital function may be sacrificed.

*Dangers of Colpectomies* — (References 3-4-5-6-7-8-9-11)

All authors agree that the subtotal colpectomy or colpocleisis is very safe and can be easily done under local infiltration. However, there are these restrictions, the cervix, the corpus uteri with its adnexae must be free from pathology. F. L. Adair and L.

\* Department of Gynecology, St. Mary's Hospital.



DuSal reviewed 260 cases with 86% good results. The failures were due to making the lateral channels too large and a few cases due to failure of sutures to hold.

Total colpectomies when combined with vaginal hysterectomies are more of an operative procedure and therefore are not as safe as a subtotal colpectomy. P. Bucz and B. Dupeaux reported 10% fatalities with this procedure. However, this percentage is very much greater than given by the American operators. This operation is usually done with a general anesthesia — either inhalation or spinal, however, I have done this operation by nerve blocking and local infiltration of vaginal mucosa and broad ligament by the same technique, but less extensive, than that used in the Shauta operation (Reference 10) and found it very satisfactory.

#### *Review of Statistics—1939 to 1949—(Reference 12)*

In this series, there were 1,023 gynecological operations of which 206 were cases of second and third degree Procidentia; 190 of these cases were prolapsed uteri and 16 cases of prolapsed cervixes. There were also 103 cases of first degree prolapsus. If in this series, there is a larger percentage of procidentia than usually met in the larger medical centers, it is because in some rural communities from which many of these patients came, and even in this city, most of the women have had large families and do not have much time to bother with doctors and only do so for marked pelvic distress or large ulcerative lesions of cervix or bladder. The great majority of those women with second and third degree prolapsus were 50 years or older.

#### *Operations Employed*

The 103 cases of 1st degree prolapse were treated by vaginal repairs, cauterizations and conization as indicated with intra abdominal corrections of position of uterus by shortening of round ligaments, by various techniques, combined with shortening of the utero sacral ligaments, in all cases. Of the 216 cases of procidentia — 122 were treated by vaginal hysterectomies with colporrhaphies — 78 by abdominal hysterectomies with colporrhaphies — 6 by vaginal colporrhaphies with shortening of the cardinal ligaments in front of the cervix, Kielland technique — 10 colpectomies — 6 subtotal and 4 total.

#### *Operative Technique*

Subtotal colpectomies were modified from the classical LeFort operation, only, in that a perineorrhaphy was performed as an essential part of the procedure.

phy was performed as an essential part of the procedure.

Total colpectomies were performed by first doing a vaginal hysterectomy, Mayo Technique. The anterior vaginal wall was denuded leaving just enough mucosa to be everted as it is sutured to a similar area on the upper portion of the posterior vaginal wall with No. 0 Chromic catgut everting Lembert Stitch. The perineum had been denuded and a perineorrhaphy performed in the usual manner and a permanent catheter left in the bladder. There were no deaths and no complication with any of the colpectomies.

#### SUMMARY

Review of literature shows that colpectomies have a very useful place in surgery because of its safety and permanency of cure. In the patient in whom it is indicated and to which there isn't contraindications it should be offered and advised. The fact, that it is one of the less commonly employed operations, is no excuse for it being discarded. In my series there were ten colpectomies, six subtotal and four total, in a series of 1,023 gynecological operations of which 206 were cases of procidentia.

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- 9) LeFort Colpocleisis, Conrad and Collins, and Frank R. Lock, *Amer. Jour. of Surgery*, Aug., 1941.
- 10) Peham and Amreich, *Op. Gyn.*, American translation by Ferguson.
- 11) LeFort Colpocleisis, F. L. Adair and L. DuSal, *Gyn. and Ob.*, Aug., 1936.
- 12) Statistics gathered and compiled by the Medical Records Librarian, Saint Mary's General Hospital.

Eighteen cases of tuberculosis were discovered by the Los Angeles City Health Department and Board of Education in the first year of routine X-raying of

all applicants for positions in the city's schools.—*California's Health*, July 15, 1948.

## FLUORINE AND ITS EFFECT ON TEETH\*

H. I. MARCOTTE, D. M. D., Lewiston, Maine

During the last decade dentistry has been presented with evidence suggesting a practical method for partially controlling dental caries in large population groups by means of fluorination of domestic water supplies. Such a suggestion originated principally from studies of the effects of fluoride-bearing waters. In view of the fact that hitherto no effective means of mass control of this disease has been known, both the dental profession and the laity are extremely interested in the evidence presented.

Prior to 1938 much of the dental research in water-born fluorides centered on the problem of dental fluorosis. Today the cause of this disease and methods of prevention are known. Of special importance in the caries-fluorine phenomenon is the fact that the concentrations of fluorides which produce fluorosis also are known. Aside of the establishment of these basic facts additional knowledge has been obtained. Studies in endemic dental fluorosis provided the proving ground whence evolved many of the ideas later utilized in the studies designed to outline the epidemiological characteristics of the fluoride-caries relationship.

Before the etiologic agent of dental fluorosis was known and prior to the first report of low caries rates in endemic areas, mention was made of the fact that caries was no more prevalent, and probably less so, in persons who exhibited evidence of fluorosis. Special interest was focused on the caries-fluorine relationship a decade ago when fluorine was recognized as the cause of mottled enamel and the earlier observations were supported by the results of both laboratory and epidemiologic studies.

The reports concerning the lower caries rates in areas of endemic fluorosis in South Dakota stimulated epidemiologic studies. These were designed to check by detailed local investigations the relation between fluorosis and caries.

The first of these investigations were made in four cities in North Central Illinois. Two of these cities, Galesburg and Monmouth, had communal water supplies which contained 1.8 and 1.7 parts of fluoride per million respectively. Quincy and Macomb, the control cities, used domestic water supplies which were considered fluoride-free (less than 0.2 p.p.m.).

The prevalence of dental caries in the children of

these four communities differed greatly. The average 13-year-old child in Galesburg had experienced caries in only about two permanent teeth while in Quincy the average 13-year-old child presented about six. It also was noted that in Galesburg and Monmouth approximately 36% of the children were caries free as compared to 14% in Macomb and 4% in Quincy.

The evidence from this study together with other information available at the time pointed to water supplies and to the fluoride content of these waters as the primary associated factor. This raised the question of whether a decreased prevalence of dental caries is associated with the use of water supplies whose fluoride content is less than the concentration necessary to produce any significant amount of dental fluorosis.

To answer this question a detailed study of school children in eight suburban Chicago communities was made. The results confirmed the findings at Galesburg and Quincy. There were marked differences in the prevalence of caries between children using fluoride water as compared with children using the fluoride-free water.

Experiments have been conducted by application of sodium fluoride to the teeth with similar results. Furthermore, clinical studies designed to develop and refine on fluoride technic have demonstrated that four applications of a 2% solution to the teeth of children effect a 40% reduction in the incidence of caries.

The duration of the caries-inhibiting effect is not fully known. The results of clinical studies continued for three to five years indicate that there is no appreciable loss in prophylactic value with the passage of time.

In order to provide a practical basis for topical applications of fluoride to the teeth of children, it is suggested that a series of applications be given at the ages of 3, 7, 10 and 13 years. These ages should be varied in accordance with the tooth eruption pattern of the individual child. An application at 3 would provide protection for the deciduous teeth. Subsequent applications would provide protection for the permanent teeth during the period of changing dentition; the incisors and first molars at 7, the bicuspid and cuspids at 10 and the second molars at the age of 13.

\* From the Dental Service, St. Mary's General Hospital.

There would be little question that the mortality and morbidity from tuberculous infection in the children of Europe seriously increased owing to war

conditions, and in many countries is still a matter of the greatest concern.—Richard W. B. Ellis, M. D., *Brit. M. J.*, Feb. 7, 1948.



## TACHYCARDIA AND ITS TREATMENT\*

BERTRAND BELIVEAU, M. D., Lewiston, Maine

Rapid action of the heart is at the present time the most common and obvious cardiac manifestation.

The varieties and causes of tachycardia are so numerous that it is necessary to present a classification:

1. Sinoauricular tachycardia.
2. Auricular paroxysmal tachycardia.
3. Auricular flutter.
4. Auricular fibrillation.
5. Ventricular paroxysmal tachycardia.
6. A-V nodal paroxysmal tachycardia (rare).

This paper will not deal with the mechanism, diagnosis and prognosis.

The treatment of sinoauricular tachycardia is that of the underlying disease or other factors. Much medicine has been wasted in the past in an effort to reduce the heart rate in sinus tachycardia secondary to infection or other pathological causes. There are rare exceptions when in the presence of heart disease it may be important to avert failure. Digitalis then may help to maintain myocardial tone, and also in slight degree may even reduce the sinus rate. Quinidine is ineffective in sinoauricular tachycardia. Sedatives such as bromides may help somewhat when there is a nervous element responsible.

The treatment of auricular paroxysmal tachycardia is simple enough since reassurance, rest and avoidance of exciting factors usually suffice. One very simple and occasionally helpful method of stopping an attack is firm pressure for a few seconds on the carotid sinus, usually more effective on the right side of the neck than on the left.

The drug most commonly used is quinidine sulphate in doses of 3 to 6 grains to be repeated at two-hour intervals. This same drug can be used in a prophylactic manner in doses of 3 grains for a few days if needed. In emergency, quinine dihydrochloride can

be used parentally in dosage of  $7\frac{1}{2}$  grains intramuscularly at two-hour intervals if the attack is severe.

Digitalis has not been advised in recent years but it can be distinctly helpful both in preventing and in treating paroxysms. Other preparations are less important. There are, however, two other vagotonic drugs that are useful in very resistant cases. The first is syrup of ipecac, 2 to 4 drachms, repeated in a few hours even to a point of severe vomiting. Mecholyl is the other drug of choice given subcutaneously in the dosage of 20 to 50 mgms. This drug may have disagreeable side reactions and atropine should be at hand as an antidote in case of need.

The treatment of auricular flutter is much more simple. The drug of choice is digitalis and the usual method of digitalization should be employed.

The treatment of auricular fibrillation is much the same as auricular flutter. Ordinarily digitalization is wisest but for short paroxysms quinidine sulphate may be the best measure but given with electrocardiographic control. The patient should be at rest and taking 6 grains of quinidine every two hours for three to six doses as needed. Morphine is usually not necessary and should be avoided unless there is pulmonary edema or status anginosus.

Ventricular paroxysmal tachycardia is treated in the same manner especially with the use of quinidine. This drug is in fact more effective in ventricular than in auricular paroxysmal tachycardia.

A-V nodal paroxysmal tachycardia is very rare. It is usually treated in the same manner as auricular paroxysmal tachycardia.

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\* From the Cardiac Service of St. Mary's General Hospital.

The postponement of the first infection from childhood to adult life, which we are witnessing at present, may have a corresponding effect on the age at which the initial manifestation of chronic pulmonary tuberculosis is likely to develop. At any rate, from a practical standpoint, it seems inadvisable to regard the risk of developing the disease as limited to any particular age in adult life.—David Reisner, M. D., *The Am. Rev. Tuberc.*, March, 1948.

Estimation of the therapeutic effect of any drug on such a disease as human tuberculosis is extremely difficult. This is especially true in view of the chronicity of most forms of the disease and the known favorable response of the disease to proper diet, collapse therapy and rest in the absence of any treatment with drugs. — Archie H. Baggenstoss, M. D., William H. Feldman, D. V. M., and H. Corwin Hinshaw, M. D., *Am. Rev. Tuberc.*, Jan., 1947.

## THE INDUSTRIAL PHYSICIAN AND THE FAMILY DOCTOR

BLINN W. RUSSELL, M. D., St. Mary's General Hospital, Lewiston, Maine

Modern living and national security depend upon a high level of efficient and coördinated industrial productiveness. Industry has per-force become increasingly alive to the importance of the workers' health. Ill health in a worker means decreased productiveness, inattention, decreased quality of product, increased scrap, costly absenteeism, and a host of other effects not the least of which is increased liability to accident and injury. This country is an industrial country. Whether or not it survives in world competition depends upon the skills and efficiency of its workers. This means that the industrial population cannot be permitted to lose its effectiveness with respect to matters of health. Just how the maintenance and improvement of the health and effectiveness of industrial workers can best be accomplished is a medical problem and the solution of the problem will better be attained by the coöperation of medicine and industry than without such coöperation.

This new approach on the part of both industry and medicine is forthcoming. It is well developed by many large corporations and smaller units are following suit. Industrial medicine as a specialty is developing. Some universities have inaugurated post-graduate courses, some have established fellowships and a few are including some time for industrial relations in the undergraduate training.

The responsibilities that develop will be discharged mainly by the private practitioners and partially by the practitioners who limit themselves entirely or set aside portions of their time to the services of industrial plants.

Obviously any project which affects physical welfare must start with physical examination. This examination should be as comprehensive as circumstances permit. The objectives of industrial physical examinations are:

- (1) To facilitate placement and advancement of workers in accordance with physical and mental fitness.
- (2) To acquaint the worker with his physical status and to advise him in improving and maintaining physical good health.
- (3) To safeguard the health and safety of others.
- (4) To discover and control the effects of unhealthful exposure.
- (5) To promote coöperative support and understanding by the employer and employee alike.

It is to the consideration of the first two of the above-named objectives that this discussion is mainly directed.

The only absolute bars to immediate employment in non-hazardous occupations should be:

- (1) Communicable disease.
- (2) Mental illness in which impaired judgement or actions prevent coöperative effort.
- (3) Incapacitating injury or disease.

The findings are not necessarily considered as pathological entities but as related to the specific job which the person is to do. Unlike the case of the hospital examination, the man comes in under his own steam ready to go to work. Often the abnormal findings come as a surprise. The man himself may be unaware of his disability and feels hurt, not to say insulted. But nobody wins if a person is allowed to take a job for which he is unsuited. Frequently he goes straight to his family doctor which is precisely what he should do. More often than not it has been suggested by the examiner that he make this visit.

In as much as management has assumed the cost of industrial accident coverage and also in considerable degree of insurance coverage for hospitalization, sickness benefits, surgical benefits, and weekly compensation for time out, and must also absorb the indirect losses that go with absenteeism, there must be some protection against acceptance of the obviously unfit. Insurance is based on averages of groups of people assumed to be in average health from the start. When management assumes a fair average of health and accident risk for its employees there is no inclination or desire not to fulfil its obligations. However, that does not imply betting against the impossible odds of a personnel overloaded from the start with the obviously unfit. No industry so overburdened could long expect to maintain a competitive position in its field.

However, once an individual is hired then the purpose of further examination and review is not to seek reason to deprive a person of his job, but rather to help him in his present and future welfare. Re-examination at reasonable intervals is desirable. Certainly a worker who enjoys the security of the extensive insurance coverages and the seniority rules that prevail today in most industrial plants should try to do his part in promoting and maintaining his efficiency.

There are influences which often militate against full coöperation on the part of the established worker.

The time lost because of industrial injury and occupational disease is about 10% of the total absenteeism for all causes. This is reflected in the fact that The American College of Surgeons, and also The American Medical Association, do not recognize serv-



ices limited to injuries alone as adequate for listing of industrial practice.

To be so recognized there must be adequate first-aid facilities staffed by trained personnel, nurses and physicians, either on a part time or full time basis according to the size of the plant and the nature of the industry, supervision of the nurses' work by the physician, and the activities of both supported by adequate case records of diagnosis, treatment and results. Medical services must be an essential part of the program.

In a plant where adequate facilities are maintained it is found that upwards of 20% of the visits to the clinic are for complaints not in any way related to the worker's job. This might seem to bear out the criticism sometimes heard that the industrial clinics are offering free treatment to the detriment of the general practitioner's income. However, most of these visits are for heartburn, running noses, hangovers, headaches, simple diarrhea, dysmenorrhea, and similar minor complaints. These are not problems that send the patient to his physician. If they go anywhere they might perhaps get as far as the drug store. Immediate simple treatment of these minor things enables the worker to stay safely on the job and, if necessary, follow through with his own doctor after working hours.

It is also the clinic's responsibility to make sure that the bellyache is not appendicitis and that the diarrhea is not cancer of the rectum. Many non-critical conditions appear at the clinic, such as Diabetes, Arthritis, Hemorrhoids, Varicose Veins, etc. They are either sent in by an alert foreman who suspects that something is wrong or they seek the clinic as a first contact for advise or relief. An explanation of the nature and importance of the situation affords the patient the little moral boost which sends him on the way to his own physician.

Many cases of hypertrophied tonsils, varicose veins, hernia, etc., necessarily are causes of rejection of new applicants. Frequently these people seek proper surgical treatment and come back entirely eligible for employment.

From the foregoing I think it is obvious that the industrial clinics serve the general practitioners with added income much in excess of any so-called diversion of "business" that might occur.

The plant physician and nurse are ready and willing to assist the worker's personal physician (under his direction) by making available on the job auxiliary

methods of treatment such as diathermy and injections when desired. These treatments are often time-consuming for the doctor or are beyond the financial resources of the patient to pay for the frequent office visits. When requested they are free to the patient and often welcomed by his doctor.

The basic ethical principles of private practice and industrial practice are the same. By adherence to these principles the possibilities of disagreement are minimized. The industrial physician should follow these precepts regardless of any pressures, and in turn the private practitioner should supply adequate and readily available care for industry's people. There need be no conflict in theory or practice concerning the difference of approach by the industrial and by the private physician. Each needs the other for the proper discharge of his duties. Instead of representing opposed purposes they should be united in the common interest of good care for the patient.

Although at times the feelings of managerial groups, labor groups and even medical groups may seem unreasonable it is only by clarification of the issues that an understanding may be reached.

Certain rules and regulations regarding leaves of absence, for instance, are necessary if the rights of all are to be observed. Also nearly all industrial establishments have complicated sets of rules regarding job seniority. Many of these rules are not of management's seeking or choice but they have to be followed, often times to the disadvantage of the worker, under some circumstances.

On the other hand, leave of absence is often asked on the grounds of excessive fatigue and its sequelae without considering the fact that the man is building a house or the woman is carrying on a strenuous household regime outside of normal working hours. Or a doctor may criticize the heavy work load a man claims he is carrying without trying to find out what the work really is or if the man is following his instructions as to the technique of his job. Sometimes it is necessary to discriminate between a toxic hazard and what in fact is merely a bad smell which the circumstances of the work make difficult or impossible to eliminate.

Industry, through its medical clinics, welcomes inquiry and suggestion on all of these subjects. Wherever industrial medicine exists cultivate it, suggest in what ways it can help you and help the workers who after all are your patients.

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We are well aware of the penalties of delay in diagnosing tuberculosis. Undiscovered, the disease progresses, often to the point of hopeless intractability; unchecked, it spreads freely; and unrecog-

nized, it breeds new cases. If we are to succeed in controlling tuberculosis, this is exactly what must not continue to occur.—Francis J. Weber, M. D., *Pub. Health Rep.*, Oct. 1, 1948.

DUODENAL ULCERS\*

Some of the Surgical Aspects

ALCID F. DuMAIS, M. D., Lewiston, Maine

INTRODUCTION :

Recent surgical advances and increased physiologic knowledge regarding the "ulcer diathesis" have necessitated a re-evaluation of the surgical treatments for the duodenal ulcer patient. In order to ascertain the present day trend in the surgical approach of duodenal ulcer patients at St. Mary's General Hospital, a survey of its records was undertaken for the years 1943-1948, inclusive. All cases of gastric ulcer, simple or malignant, as well as cases of questionable duodenal ulcers were excluded. Attention was centered on duodenal ulcers proven by X-ray, operation and/or pathologic reports. A few aspects of this problem are presented here.

HISTORICAL :

The historical background of this subject is voluminous. A brief review is presented to credit those men who highlighted the eras in the surgery for duodenal ulcers. For more extensive reviews one should consult the papers of Wangenstein<sup>1</sup> and Lewisch.<sup>2</sup>

The first report of duodenal ulcer with perforation was made by DeMuratto in 1688. Later, in 1737, Morganin found an ulcer in the duodenum, as well as several in the stomach, in a woman after death. Subsequently followed the work of W. C. Roentgen (1895) with X-rays, Schindler (1920) with the gastroscope and W. B. Cannon (1896) in his studies of the physiology of deglutition with bismuth. These men contributed much to our diagnostic knowledge.

Pioneering in gastric surgery is accredited to Merrein who performed the first pylorotomy on a dog in 1810. Billroth carried out the first successful partial gastrectomy in a case of carcinoma of the stomach in 1881. Wolfer, also in 1881, performed the first gastro-enterostomy for carcinoma of the stomach. Heinke and Mikulicz separately performed the

first pyloroplasty in 1886. Thus, the three basic surgical procedures employed for stomach surgery today all originated within a five-year period. Rydgier (March, 1884) was the first to describe the surgical treatment of a case with duodenal ulcer stenosis.

More recently a large number of contributors have furthered our knowledge of this problem and the work of Dragstedt, Mann and Williamson, Wangenstein, and many others, are too well known to demand further elaboration here.

*Analysis of Material in this Study*

General Data: There were over 250 patients admitted to St. Mary's General Hospital for duodenal or stomach ulcers from 1943 through 1948. Of these 110 were proven duodenal ulcers. The others were ultimately shown to have other conditions such as carcinoma of the stomach, gastric ulcer, undetermined, etc. Of the 110 cases of proven duodenal ulcers, 79 or 71% were placed on a medical regime while the remaining 31 or 29% underwent some form of surgery. Table I shows the type of surgery performed, the comparative frequency of each procedure and the indications for surgery. One must cite that 80% of subtotal gastric resections have been done in the last two years, the procedure having been but recently performed with any frequency at this institution.

The complications necessitating surgery were, in the order of their frequency, perforation 45%, obstruction 35%, serious hemorrhage 12% and intractability 10%. The latter category comprised those who suffered recurrent bouts of pain due to penetrating ulcer, those who failed to respond to a medical regime and those generally incapacitated from varying ulcer symptoms and thereby suffered physically and economically.

TABLE I — COMPLICATIONS AND TREATMENT

Operative Procedure	No. of Cases	Perforation	Obstruction	Hemorrhage	Intractability
Closure with suture with or without omental graft	14	14	0	0	0
Subtotal gastric resection	13	0	10	1	2
Gastro-enterostomy	4	0	1	1	2
Totals	31	14	11	2	4

\* From the Surgical Service, St. Mary's Hospital.



**Mortality:** Nine of the 110 patients or 0.8% died in this series of cases. None of these patients were submitted to surgery. The causes of death were perforation, 3 cases, and hemorrhage, 6 cases. The patients who died from perforation were hospitalized 48-72 hours after the onset of the disease, were moribund, and all died within 24 hours of entry. The cases that died from hemorrhage were in shock and moribund in 2 cases, another died from massive hemorrhage six hours after admission, and the other three cases presented insufficient data on their records to determine whether or not surgical interference should have been contemplated.

#### SURGICAL MORBIDITY:

There was an overall morbidity of 16% for the 31 cases surgically treated. Of these complications, 95% occurred in the years 1943-1946, inclusive. They were as follows: recurrent ulcer following gastro-enterostomy (1), gastro-jejuno-colic fistula following gastro-enterostomy (1), abscesses of wounds and prolonged drainage (3). This last occurred in three of the five cases that were drained after the repair of the perforated duodenal ulcer.

**Miscellaneous:** The amount of tissue removed during the performance of a subtotal gastric resection, the type of pre and post-operative care, and the follow up reports and results were so sparse in the years 1943 to mid 1947, that no conclusive data could be secured.

#### *Discussion of Findings*

This investigation was undertaken to determine if the general surgeon had materially altered his view of recent advances in this field. We have been prompted to institute many measures in this institution in an attempt to correct some of the deficiencies brought out in this survey. This situation exists in many of the intermediate sized hospitals found in our communities today.

Much of the data serve to substantiate that which is already well known. Duodenal ulcer is first and foremost a medical disease. Estimates are that 80% can be treated successfully by conservative measures. We report 79% in such cases. The complicated ulcer needing operative interference is reported at 20%. Our incidence of 29% is slightly higher than average. This can be attributed to the fact that in an industrial area the great majority of ulcer patients will not enter the hospital for regimentation unless complications compel them to do so.

It was noted that the surgeons refrained from surgery unless the ulcer was complicated by perforation, obstruction, hemorrhage or intractability. This tends to confirm a generally accepted fact. In addition, there is a definite trend to abandon older operative procedures. Gastro-enterostomy found its primary use in the debilitated, aged or poor risk patient. Subtotal

gastric resection is being progressively utilized as the method of choice. In this series there were three subtotal gastric resections done previous to 1947. Ten of the thirteen resections were performed during the latter portion of 1947 and during 1948; thus demonstrating succinctly the trend in favor of this procedure.

The bleeding ulcer continues to demand an extremely critical judgement. In this instance the co-ordination of the internist and the surgeon is demanded. The large number (six out of nine) who died from hemorrhage under a therapeutic regime of waiting bespeaks an aloofness on the part of the internist of questionable wisdom. To be sure there is no adequate criteria for these cases; each case must be individually judged on its own merits. However, it would appear that an unusual degree of ultra-conservatism has been developed over a period of years. Attempts are now made to have such questionable cases seen by a group of internists and surgeons in order to lower the mortality in this complication of duodenal ulcer.

The above considerations were in line and praiseworthy. Of greater importance to this group was revealing the inefficiencies in dealing with the cases. This has made possible a number of ameliorations to benefit all of those involved. The records showed a dire lack of appreciation for adequate pre-operative investigation of the patient's status. Over 60% showed that a complete blood count, urine-analysis, Kahn and X-ray were all the investigations that were done preceding the actual surgery on the patients! Gastric analysis, blood chemistry, electrolyte balance and state of nutrition were not taken into consideration before surgery was undertaken. The failure to take cognizance of such important aspects of the problem vitiates any real evaluation of the procedure, exposes the patient to grave risk and increases all surgical hazards. In addition, it is an indictment against the physician.

What constitutes an adequate subtotal gastric resection? The amount of tissue removed was measured from 1947 on in a consistent manner. The few measurements taken previous to that time would tend to show that one-half or even less of the stomach was removed. The men who removed a little more than "a sleeve and a cuff" are posing an unfair load on the remainder of the group. The essentials of an adequate resection have been well stated by Wangenstein. Three-quarters of the stomach, excision or removal of the antral mucosa, fairly complete excision of the lesser curvature, short afferent loop, and if possible the removal of the ulcer bearing segment — anything less than the aforementioned principles makes void the adequacy of the subtotal gastric resection performed. Probably weighing the amount of the tissue removed is a more accurate way of ascertaining

*Continued on page 97*

## CLINICO-PATHOLOGICAL EXERCISE

### Case presented at St. Mary's General Hospital, Lewiston, Maine

Presentation: ROMEO A. BELIVEAU, M. D. Discussion: FRANK METHOT, M. D.

Edited by: JOSEPH E. PORTER, M. D., Portland, Maine

A married woman, age 49, was admitted to the hospital complaining of pain in the right side just below the ribs.

**Past History:** Measles, mumps and whooping cough as a child. Always healthy up to two months ago, when she entered another hospital, where a cholecystostomy was performed.

**Present Illness:** Two months ago a gallstone the size of a golf ball was removed. She remained at the hospital for one month, during which time she had phlebitis in both legs and "a clot of blood in the lungs." She also complained of occasional heartburn and vomiting. The pain in the right side was described as very severe and of a pulling nature when she lay down, and relieved when sitting up. She complained of slight dyspnea and orthopnea. There had been no cough, hemoptysis, or night sweats. On the evening before admission she had an attack of indigestion, with gas and abdominal distress.

**Physical Examination:** Well-developed, well-nourished obese woman lying propped up in bed. Skin somewhat pale, sallow, warm, moist. Pupils regular and equal. Teeth poor. Chest symmetrical, expansion equal, dullness on percussion in right base posteriorly and laterally, with diminished breath sounds and increased vocal fremitus. Heart not enlarged, no murmurs, rate 90, blood pressure 126/92. Abdomen tender throughout, distended, and tympanitic. No masses palpated; no fluid; liver not enlarged. Varicose veins present in both legs; pitting edema of both ankles.

**Laboratory Examinations:** Urine: Specific gravity 1.021; not remarkable. On admission, white count 9,200, with 78% polys. Blood sugar 143 mg.%; N.P.N. 29 mg.%. Kahn and Hinton negative. X-ray: Chest shows marked density of right base, indicating consolidation in the right lower lobe. Blood counts on the 6th and 8th days showed: Hb. 70%, red cells, 5.1 million; leukocytes 19,500, and 30,000, with 490 and 92% polys. On the 8th day fluid from the right chest showed many leukocytes and Gram negative bacilli. On the 7th day X-ray showed displacement of the heart to the right, and the abdominal viscera showed a markedly distended stomach.

**Clinical Progress:** The patient developed jaundice on the 6th day, with marked pain and distension of

the abdomen. Constipation became very obstinate. She became definitely weaker, and on the 9th day vomited coffeeground material. The jaundice was more pronounced on the 10th day. On the 12th day about a quart of sanguinous fluid was removed from the right pleural cavity. On the 15th day her condition became poor and she expired.

On the 10th day Van den Bergh was positive to both direct and indirect reactions; Icterus Index 94; total cholesterol 220 and esters 152; bilirubin in feces markedly decreased; flocculation test strongly positive.

The diagnoses on the first hospital visit were: "Cholecystitis, cholelithiasis, phlebitis, and partial collapse of the lungs."

### DISCUSSION

*Dr. Frank Methot:* This case is interesting, inasmuch as it can give us an opportunity to discuss both abdominal and chest disturbances.

We do not know any of the history of this patient before her first operation, but we must assume that her symptoms date back quite some time, and we can also assume that her gall bladder must have been quite badly inflamed if it was not removed. We know definitely that she had gallstones, and that some post-operative complications arose.

Now she comes in to us with the symptoms and physical findings as described in the history. She was not jaundiced, and had a normal blood count. Her abdomen was distended, tympanitic, and tender throughout. Findings in her right chest indicated consolidation of the lower part of the lung. No fluid was detected in the abdomen.

Suddenly, on the 6th day there appeared jaundice and leukocytosis of 19,000, with 90% polys. She also developed marked pain and distension of the abdomen, with obstinate constipation. Our trouble appears to be centered in the abdominal cavity, rather than in the lungs. Her jaundice increased, as did the white count. Tests performed on the 10th day certainly suggest that the jaundice was obstructive in nature. With a history of gallstones, did she have a stone remaining in the common duct? With a history of previous operation, although there is no mention of suppuration at the time, was there a recurrence of



acute inflammation, with a diffuse cholangitis resulting in jaundice? There is no mention of her temperature. There is also a possibility of an ascending infection causing an abscess of the liver.

Now for the lung. On the 8th day some fluid from the chest showed many leukocytes and Gram negative bacilli. We have a previous history of phlebitis, of a "clot in the lung." We might conclude that she had an infarct which had become infected, with a resulting pneumonitis and empyema. The Gram negative bacilli could be colon or typhoid, organisms not infrequently found in cholecystitis.

We have to think of cancer of the head of the pancreas, with extension to the adjacent bile canals. I think we can rule out this condition. It was only two months since the previous operation, and it apparently was not recognized at that time.

Another possibility, of course, is that of homologous serum jaundice. There is no mention of plasma or whole blood transfusion at the time of her operation. This complication seems improbable in this case.

*Dr. Frank Methot's Diagnoses:*

1. Multiple abscesses of the liver, due to infected gall bladder.
2. Carcinoma of the pancreas, with invasion.

*Dr. Romeo Bernard:* There was marked distension and diffuse pain all over the abdomen; there was sudden marked increase in the white count. It is very possible that she had perforation of the gall bladder, with diffuse peritonitis. On the other hand, we note that on the 12th day the fluid from the pleural cavity consisted of one quart of sanguinous fluid. Isn't bloody fluid in a chest usually associated with carcinoma?

*D. Romeo Beliveau:* The small amount of fluid which was apparently purulent seems to have changed to a rather large amount of bloody fluid. This condition is very frequently seen in malignancy involving the pleura.

*Dr. Horace Gauvreau:* Coffee-ground vomitus means blood. How do you account for that?

*Dr. Beliveau:* You will notice that the last X-ray showed a markedly distended stomach. There should be a reason for that and the sudden very obstinate constipation.

*Dr. Max Hirshler:* It could be that this patient had more gallstones, and that a fairly large one, through the inflammatory process, has found its way

through the previous operative site and into the colon. This has been seen.

*Dr. George Desaulniers:* I think carcinoma fits in this picture; either carcinoma of the gall bladder or of the head of the pancreas.

*Dr. Beliveau:* In organs of digestion carcinoma of the gall bladder is 5th in incidence and is always associated with a more or less pronounced inflammatory reaction. Moreover, primary carcinoma of the gall bladder is found in approximately 1% of all cases operated for a clinical diagnosis of cholecystitis, and when gallstones are present, the incidence of carcinoma mounts to between 4 and 5% of all cases operated. At least 65% of all cases of carcinoma of the gall bladder are associated with gallstones.

About 80% of carcinomas of the gall bladder arise in the neck of the organ, and may sometimes be overlooked. The tumors are of two varieties, epidermoid and adenocarcinoma. The most frequent is the adeno, of which there are three types: The scirrhus, which is the most common (55%) is accompanied by considerable connective tissue, and invades adjacent structures early; the papillary type (25%) tends to grow within the lumen and form a slower-growing tumor; the colloid type forms large soft masses.

We have here a scirrhus type of adenocarcinoma, which was not removed at the time of operation, probably because the extensive inflammatory reaction with fibrosis masked the picture. In the interval between that time and the present there was rapid growth, so that now we have a carcinoma which is firmly bound to the intestine and duodenum, explaining the stubborn constipation and the dilatation of the stomach, with resulting coffee-ground vomitus. We have extension into the liver, and metastatic nodules in the liver, in the nearby lymph glands, as well as the retroperitoneal glands. Nodules are also present in the adrenal, kidney, pancreas, and right lung, explaining the sanguinous fluid. The lung also presents an old infarct of the lower lobe.

*Dr. Romeo Beliveau's Anatomical Diagnoses:*

1. Chronic cholecystitis.
2. Scirrhus carcinoma of the gall bladder, with local extension and distant metastases.
3. Healing infarct of the lung, with pleural effusion.
4. Complete atelectasis of both lower lobes of the lungs.
5. Acute vegetative endocarditis.
6. Icterus.

Fear plays a considerable part in the delay that many patients allow before consulting a physician. Certainly it is the next important factor after ignor-

ance in causing delay.—C. D. Haagensen, M. D., *Bull., New York Acad. Med.*, Oct., 1948.

## THE PRESIDENT'S PAGE

If any member of the Maine Medical Association has felt any complacency relative to either the proponents of Compulsory Health Insurance or their ulterior motives or methods of procedure — let him at once rise to an expression of protest at the latest development.

The release of the report of the Committee for the Nation's Health brings to the surface a fact, hitherto partially suspected, — namely: that innuendo, hearsay and even absolute falsification will be used against the honest efforts of medical men to advance the cause of voluntary medical insurance as against government compulsion.

To argue a case on its intrinsic merits is one thing, — to descend to the level of deliberate falsehood is quite another. But in this early showing of an unfair hand, let us be warned that this is but further proof that political control of organized medicine will bode ill for the people of the United States and for the doctors throughout the country.

FORREST B. AMES, M. D.,

*President, Maine Medical Association.*



## EDITORIAL

### The Ninety-fifth Annual Session Program

It is the desire of the Chairman of the Scientific Committee at this time to submit a preliminary report on the program to be held at Poland Spring on June 19, 20, 21, 1949.

This program is based upon the results of the poll which was taken throughout the State of Maine to determine the type of program most desirable, and the Committee certainly hopes that it will be enjoyed by all. Nothing has been spared to make this a practical program for every physician in the State whether he specializes or does general practice.

All the major speakers are arranged for at this time. Sunday night, which is the opening general session, we have two very special attractions. The first is a talk by Arthur Conrad who is chairman of the Medical Service Foundation. The second is Mack Murray, one of the leading entertainers in the United States. This man is so sure of giving us a pleasant evening, he has specifically stated that if he does not give a satisfactory performance he will be glad to have us donate his fee to our favorite charity.

Monday morning the program will start off in its Scientific Section when the program will be turned over to an orthopedic conference. This will be under the chairmanship of Allan Woodcock, M. D., who has arranged a very excellent lecture plus a question and answer period. From 11:30 A. M. to 2:30 P. M., there will be an Eye Conference for those who are interested. Monday afternoon, there will be a Surgical Conference under the chairmanship of William Cox, M. D., of Auburn. This will also consist of a lecture on some pertinent subject plus an open question and answer period. Monday night we are indeed fortunate to have with us one of the leading figures who is interested in medicine from the layman's point of view; namely, Mr. Alan Richardson, who is editor of the excellent medical journal known as *Medical*

*Economics*. He will have just returned from England and will give us a talk called *Free Medicine in Britain*.

Tuesday morning, there will be a general medical conference under the chairmanship of Richard Hawkes, M. D., of Portland. This will consist of a lecture on some pertinent subject plus an open question and answer period. Between the 11:30 A. M. and 2:30 P. M. period, conferences will be held on Ear, Nose, and Throat, and on Pediatrics. Tuesday afternoon, the program is being turned over to the medico-legal group who have arranged their usual interesting program. Tuesday night, we have as our speaker, Joseph Lawrence, who is director of the Washington office of the American Medical Association. He should be able to give us a most enlightening talk especially pertinent at the present time. The Governor has been invited to attend this night as you know it is also the President's night.

If there are any other special groups who would like to have conferences, the program committee would be glad to arrange this. It should be realized that some of the requests made in the poll have not been fulfilled. However, as these requests have been from isolated individuals, it was felt that there was not sufficient interest to necessitate arrangements.

No expense has been spared to make this an outstanding meeting. We hope it is arranged to suit the majority. We know there are some who will be disappointed. There is still time to correct this if it is possible. The Chairman of the Committee would be pleased to hear from any individual who has any suggestions.

You will receive in the near future, a more detailed report and we only hope that this is the biggest State Meeting we have ever had.

MARTYN A. VICKERS, M. D.,  
*Chairman of Scientific Committee.*

# WHAT WILL WE DO WITH THE DOCTORS \$25?\*

## The National Campaign Plan of Procedure

*Mr. Chairman and Ladies and Gentlemen:*

Every minister preaches from a text — and every campaign, if it is a successful campaign, has to have a *theme!*

The theme, if it is geared to reach more than 100 million people, as we must in this campaign, should have simplicity and clarity.

Most of all, it must high-point the major issues of the campaign with great brevity — in language that paints a picture understandable to people in all circumstances.

### EVERY DOCTOR A CAMPAIGNER

That's one of the reasons we have a large blown-up color reproduction of the famous Fildes painting, "THE DOCTOR," on exhibit here today, with the simple caption under it:

"Keep Politics Out of This Picture!"

The picture and the caption, even without elaboration, focus attention on one of the most important arguments against government-controlled medicine.

*Smaller* color reproductions of this famous painting soon will go up in doctors' offices all over America as one of the first steps in dramatizing our case to the American people — and more important — as the first step in *making doctors campaigners in their own behalf*. For this purpose we have added a hundred words of text which help to establish the *theme* of this campaign.

I'm going to read you that text, because it stresses, in simple language, the essential points of the case which we believe will turn the tide *against* compulsion and *in favor* of voluntary health insurance.

The text is as follows:

*Keep Politics Out of This Picture!*

When the life — or health — of a loved one is at stake, hope lies in the devoted service of your Doctor.

Would you change this picture?

Compulsory health insurance is political medicine.

It would bring a third party — a politician — between you and your Doctor. It would bind up your family's health in red tape. It would result in heavy payroll taxes — and inferior medical care for you and your family. Don't let that happen here!

You have a right to prepaid medical care — of your

own choice. Ask your Doctor, or your insurance man, about budget-basis health protection.

This is signed: American Medical Association.

These smaller posters will be sent under the signature of the A. M. A. to show medical men throughout the country that the Association is resolutely behind the National Campaign. They will be sent to doctors only at their own request. Return postal cards will be in the mail shortly.

The dimensions of the posters are approximately 18 x 20 inches. They are dignified — but carry a strong message — stronger, we are aware, than most doctors are accustomed to display in their waiting rooms. Their final cost, including the right to reprint the famous picture, art work, stock, printing and mailing comes to about 30 cents each. If we can light the crusading fires, and tie into the campaign the *majority* of the doctors of this country, for the cost of 30 cents each, the results will be well worth the price!

For the information of some of you who are wondering just when these will begin to show up in doctors' offices — here is the production schedule. This poster has been in the works for three weeks. It was out of our hands on February 7. The press proofs will be submitted to us on March 3. The schedule calls for delivery to the bindery on March 15; cut and drill sheets, March 21; production completed March 25; inserting, addressing and mailing completed on April 4.

That's a lot of time — 60 days; a lot of effort; a lot of money. And we look for real results.

### THE REAL AMMUNITION

The major portion of the campaign budget will be spent for production of materials — the campaign ammunition. We are not going to waste any campaign funds on faulty ammunition. Any general pamphlet produced will have to be printed in minimum lots of 7,500,000 — just to put 50 copies into each doctor's hands alone. To make the smallest trickle beyond that outlet to the public, we shall have to print a minimum of 10 million copies of any piece produced. That means simply that we can't afford to experiment. We can't afford to throw our next-best or divided efforts into print and hope it will suffice. What we produce must be brief enough to read — dramatic enough to create sentiment — and sound enough to produce action from the thinking people of this Nation.

Some very excellent basic material has been pro-

\* Presented by Clem Whitaker, Leone Baxter, Directors of the National Education Campaign of the American Medical Association, for the Conference of State Medical Societies, Chicago, February 12, 1949.



duced by men of medicine and men close to the profession, long before the National Education Campaign was initiated — and that will give the production of the new material the most helpful impetus.

One of the pamphlets in the planning and production stage is a small, sparked-up *human-interest folder* to satisfy the need among doctors for a simple piece that can be given to patients, mailed with statements or placed in waiting rooms. It will be suitable as well for general use by allied professions and industries. This will be a special appeal, illustrated public pamphlet, geared to the interests of the average citizen — the veteran, farmer, mother, businessman, wage-earner, etc.

The doctors will receive their first copy of the pamphlet direct from A. M. A. headquarters, with a brief letter, telling some of the highlights of the proposed campaign, and advising the doctors that they can get the pamphlet in quantity through their State or County medical societies.

A *Question and Answer pamphlet* which actually will serve as the doctor's campaign handbook, also is in process. The handbook should give every doctor, not only the facts he needs to argue his case effectively, but also simple instructions on how to practice on the body politic.

The small leaflet will be a general public piece and can be distributed through many channels. The handbook, while beamed to doctors, also will be used for distribution among members of our lay committees. We believe that the dentists' associations, the druggists' organizations, the hospital associations, the medical auxiliaries and various other closely related groups should be urged to turn out similar material, or use ours under their own imprints.

We also plan to assist many coöperating *national* organizations — veterans' groups, for example — to produce pamphlets slanted to their own memberships, and emphasizing the arguments which will have special appeal to them.

A third pamphlet is in preparation whose title will be "*Calling Every Doctor — This Is an Emergency!*" This, too, will go directly to physicians, with a letter from the American Medical Association. It will be a briefly presented statement of the issue, the objectives — and the procedure to accomplish those objectives. Its purpose will be similar to that of the poster — to get every doctor who believes in the private practice of medicine working enthusiastically with his local campaign committee.

#### A PAMPHLET CAMPAIGN

Actually, this issue is made to order for *pamphlet presentation* . . . and we plan heavy use of pamphlets, running into many millions of copies, to tell medicine's story dramatically and effectively to both

*leaders* of public opinion and *rank and file* citizens throughout the country.

With new developments and changing conditions in the campaign, there likely will be need for frequent revision of the text of early pamphlets, or the production of entirely new material. As a consequence, a heavy load will fall on our writing and production department and one of the first problems of course is to produce copy fast enough to satisfy the press, A. M. A. members, State and County societies and the literally hundreds of business and civic groups which all require special servicing.

Above all, the written material in this campaign must be emotional, fighting prose. We can't win an audience with dry, statistical copy. We have to give the people *facts*, but in very readable form. The surest way to break down apathy and public disinterest is to turn out copy that stirs the emotions — and in doing so, opens closed minds.

It is vital, too, that much of this flow of words should reach the people through *normal* newspaper and magazine channels, rather than through direct publicity releases. We intend to work with the great newspapers and the national magazines to get them to do special jobs, with real reader interest, and that work already is well started. The story of British medical practice today, as an example, is actually one of the most important stories of this era. A. M. A. already had started the wheels moving to get the truth and publicize it before this Campaign began. It is a story which must be told and re-told by staff writers of American magazines and newspapers.

Once it has been printed in a magazine or newspaper of national importance, re-prints of the article will be placed in the hands of key people throughout the country.

#### ORGANIZATION PHASES OF THE CAMPAIGN

There are two distinct phases of *organization activity* planned.

First is the plan of organization and operation for medical groups, which involves the relationship of the State and County societies to the A. M. A. in the conduct of the campaign. This calls for a definite division of work, with fixed responsibility in each area, so that a vigorous grass roots campaign can be developed.

Second is the plan for mobilizing the strength of the major public organizations, local, State and National—groups like the farm organizations, the more powerful business and civic associations, fraternal, religious and veterans' organizations.

The program with respect to the medical organization structure, has been discussed carefully with the Campaign Coördinating Committee members in order to reach practical and intelligent decisions. The job

must be done with as little friction as possible, so that doctors in the field will be directing their energies to winning converts, and their fire to the opposition. It is usually difficult to get 150,000 individualists (and most doctors *are* individualists) to agree on anything, but if ever the members of the medical profession needed to pull together, this is the time.

### STATE MEETINGS

A number of States have reported that within the next 30 to 60 days after the National Meeting of State Representatives (February 12, in Chicago), they are calling meetings of County Society representatives in their own States, for the purpose of passing along to them the National Plan of Campaign, and determining on their own procedures in relation to it.

Accordingly, for their help and guidance at this time, we will chart some of the important work which needs to be done within the States.

### COUNTY SOCIETY ACTION

1.—Every County Medical Society in the United States should adopt a strong resolution against compulsory health insurance within the next 60 days—and should then direct the President of the Society to communicate its action, by letter or telegram, to the Congressman (or Congressmen) representing the district; also to the State's two U. S. Senators. The Society's resolution should emphasize the inevitable deterioration of medical care and the danger to the public health, once government medicine is in operation, and should stress the tremendous growth of the voluntary systems and that the American people are taking care of the problem in the American way. The President's letter to the Congressman or Senator should ask for a reply, so that his position can be made known to the doctors of his district. Copies of all replies should be forwarded to The National Campaign offices and to the Washington office of A. M. A. as rapidly as they are received. We will provide several form resolutions as a guide to the Societies.

The combined political strength of all the doctors in a congressional district is impressive—and we need to put every Congressman on notice of the position taken by his doctor constituents.

### LAWMAKERS' DOCTORS

2.—We need to locate *the personal physician of every Congressman and every U. S. Senator* (the County Society secretary probably should take on that job) and have him send a personal letter to his patient, the Congressman, telling him of the danger of socialized medicine, and asking for his help in defeating any compulsory health insurance program

which may be submitted. We will provide form letters, but the Society secretary should help the doctor, if necessary, in re-writing and personalizing the letter in each instance. This letter also should ask for a reply — and again, the information in the replies should be sent to the National Campaign office and the A. M. A. Washington office.

### SPEAKERS BUREAUS

3.—We need an active Speakers' Committee in every County Society to cover local meetings. The Executive Secretary of each of the State Societies should aid in organizing this work. We will provide form speeches, but in many cases they will need to be localized to meet local conditions.

One of the very great requirements is for every State to develop top bracket speakers both in the profession and apart from it, who can be called on for important meetings, both State and National.

### DEBATES

We do not believe it a sound campaign practice to sponsor too many debates. They make a forum for the opposition which would be difficult for them to secure otherwise, and they are too easily stacked. This is particularly true of broadcasts of debates open to the public. Our speakers will stick to *the facts*. But already in this campaign, the opposition has begun to use the facts very loosely. Their claque in the audience are briefed to applaud wildly every trick phrase their speaker utters. And the public has no way of knowing which is fact and which is fancy. If our case were so poor that we had to stack meetings, it would not be worth the effort we shall all put into this campaign.

### PRESS COMMITTEE

4.—We need a Press Committee in every County Society to make personal calls on the editors of all newspapers in the County and urge their support of medicine's position. This work, again, should be coordinated by the State Society.

### ENDORSEMENT DRIVE

5.—Since our first objective is making the position of the people on this issue known and recognized by our representatives in Congress, much of our first campaign effort must continue to be devoted to getting organizations on record in opposition to compulsory health insurance.

In this connection, one of the first mailings from the National Campaign Headquarters to the States will be a list of conventions scheduled in each State during 1949. This should reach you during the coming week. This is not to be considered a complete list, but



we sincerely hope it will be helpful in beginning the drive for resolutions in your area. It will include all conventions reported at this early time; you will need to add to it as others are scheduled. The list will contain the following information:

- Name of organization.
- Town where convention is scheduled.
- Estimated attendance.
- Person to contact, to our best knowledge.
- Whether convention is national, state or local.

Some organizations on the list may have a policy of not taking action on public issues, or will profess "no interest." When an issue is of fundamental importance, as ours is, however, and when somebody takes the time to explain the honest facts and drive for a resolution, virtually all the important organizations do take action.

As fast as they are produced, form speeches geared to different types of audiences will come along to you; also suggested form resolutions which can be localized or particularized as you see fit; also the Question and Answer pamphlet providing brief, factual answers to the most commonly asked questions concerning the issue of compulsory health insurance. Armed with this material, a good speaker will have little trouble making a splendid, positive case before even a difficult group.

#### ENDORSEMENTS . . . PROCEDURE

Since the value of formal action from any group is in exact proportion to the work done to capitalize on it, these are some of the things which must be done, once a good resolution is in your hands:

If it is from a strong, Statewide organization you should send copies of the resolution first thing to:

- Your two U. S. Senators.
- Your Congressmen.
- Your State Legislators.
- The A. M. A. office at 1302 18th St., N.W., Washington, D. C.
- The National Campaign Headquarters*, 1 North LaSalle, Chicago.

Every *County Medical Society*, immediately it has acted, should send copies of its resolution to:

- Its two U. S. Senators.
- Congressmen from its own District.
- State Legislators from its own District.
- Its State Campaign Chairmen at the State Medical Association Office.
- The A. M. A. Office at 1302 18th St., N. W., Washington, D. C.
- The National Campaign Headquarters*, 1 North LaSalle, Chicago.

Action of other County or City organizations should be reported to U. S. Senators only when deemed of sufficient importance to merit such handling, but should be reported at once to all others listed above.

Resolutions sent to all Congressmen should be accompanied by *covering letters* asking for a reply, in order to keep advised, if possible, of the position of your legislative representatives.

*Originals of all resolutions* should be kept in the originating office, unless otherwise requested.

Copies of resolutions should reach *the press and radio* on the same day action is taken if possible, through your State or County publicity channels, as determined by your Campaign Chairman.

When an organization has acted, it should really be asked to go to work in the campaign:

- a. getting literature to its membership, either through meetings or by use of its mailing list, or both.
- b. using its house organ or news letter for both news and editorials on the issue.
- c. offering its talented members as volunteer speakers on the issue of compulsory health insurance.
- d. (Members on record in one organization can help, too, in presenting resolutions to other organizations of which they are members, and helping to steer them to favorable conclusions.)

Most of the State Medical Associations have working organizations long in existence and thoroughly ready and able to handle their part in the Campaign.

6.—Machinery will have to be set up in the few States where it is not already operating, probably under the direction of the State Society Office, to see that shipments of materials from the National Headquarters actually get into doctors' offices and finally into the hands of doctors' patients.

#### NAME YOUR STATE CONTACT WITH NATIONAL HEADQUARTERS

*It is important to name the person, presumably in your State Association office, to whom the National Headquarters will channel supplies of literature and other materials for fast distribution in your State. His name, address, and telephone number should be sent at once to the National Campaign Headquarters.*

In some States it may be desired that supplies go direct to the County Society offices. However, it is the feeling of the National Campaign directors that campaign materials in general should channel through the State Medical Association machinery, and down to the County Societies under the direction of the State itself. That, we believe, should be determined within each State.

*Continued on page 98*

NECROLOGIES

Herbert E. Thompson, M. D.  
1878 - 1949

The death of Dr. Herbert E. Thompson, 71, prominent retired Bangor physician, and former pathologist at the Eastern Maine General Hospital for twenty years, occurred at a Bangor hospital, March 29, 1949, following a long illness.

He was born at Sebago Lake, Maine, May 27, 1878, the son of Walter H. and Abbie Mains Thompson. He was a graduate of Bowdoin College and received his medical degree from the Bowdoin College Medical School in 1909.

Dr. Thompson served the Eastern Maine General Hospital from 1921 to 1942 when ill health forced his retirement. From 1910 to 1917, he served the Bangor State Hospital as pathologist, and followed this with a period at the Worcester, Massachusetts, State Hospital. He was pathologist for the Maine State Department of Health from 1918 to 1921, when he joined the staff of the Eastern Maine General Hospital.

He was a member and past president of the Penobscot County Medical Society, a member of the Maine Medical Association and American Medical Association, and a Fellow of the American Society of Clinical Pathologists.

Dr. Thompson was prominent in the activities of Anah Temple, Order of the Mystic Shrine, and was a member of the Shrine band. He was a past president of the Bangor-Brewer Lions Club, and a member of the Symphony Orchestra.

In 1910, he was married to the former Alice M. Ebbeson of Portland. Mrs. Thompson died in 1942. Surviving are a daughter, Miss Alice J. Thompson of Bangor, and a cousin, Mrs. Alice Rand of Sebago Lake.

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Charles B. Popplestone, M. D.  
1901 - 1949

Dr. Charles B. Popplestone, 47, Superintendent of the Central Maine Tuberculosis Sanatorium at Fairfield, was killed March 30, 1949, in a grade crossing collision of his car and a train at Waterville.

He was born in London, England, September 5, 1901, the son of Charles Edward and Emma Popplestone.

Dr. Popplestone was graduated from Dalhousie University Medical School at Halifax, N. S., in 1924, and interned at the Toronto General Hospital.

Dr. Popplestone, who was not married, had been Superintendent at Fairfield since November, 1947. He formerly

had been an Assistant Superintendent at the Bangor State Hospital, Bangor, Maine, a staff member at Pratt Diagnostic Hospital in Boston, Massachusetts, and had taught at Tufts College Medical School in Medford, Massachusetts. He had practiced in Swans Island, Maine, in 1928, and in Rockland, Maine.

He was a member of the Kennebec County Medical Society, the Maine Medical Association and the American Medical Association, and was a past president of the Knox County Medical Society.



## COUNTY SOCIETIES

### Androscoggin

President, Paul R. Chevalier, M. D., Lewiston  
Secretary, Irving I. Goodof, M. D., Lewiston

### Aroostook

President, Rosario A. Page, M. D., Caribou  
Secretary, Clyde I. Swett, M. D., Island Falls

### Cumberland

President, Charles H. Gordon, M. D., Portland  
Secretary, Ralf S. Martin, M. D., Portland

### Franklin

President, Maynard B. Colley, M. D., Wilton  
Secretary, Paul E. Floyd, M. D., Farmington

### Hancock

President, James H. Crowe, M. D., Ellsworth  
Secretary, Charles H. Knickerbocker, M. D., Bar Harbor

### Kennebec

President, Harold E. Small, M. D., Augusta  
Secretary, Arch H. Morrell, M. D., Augusta

### Knox

President, Frederick C. Dennison, M. D., Thomaston  
Secretary, Frank W. Kibbe, M. D., Rockland

### Lincoln-Sagadahoc

President, Philip H. Sylvester, M. D., Damariscotta  
Secretary, Neil L. Parsons, M. D., Damariscotta

### Oxford

President, Roland L. McCormack, M. D., Norway  
Secretary, Dexter E. Elsemore, M. D., Dixfield

### Penobscot

President, Henry C. Knowlton, M. D., Bangor  
Secretary, Herbert C. Scribner, M. D., Bangor

### Piscataquis

President, John B. Curtis, M. D., Milo  
Secretary, Norman H. Nickerson, M. D., Greenville

### Somerset

President, Maurice E. Lord, M. D., Skowhegan  
Secretary, H. Carl Amrein, M. D., Madison

### Waldo

President, John A. Caswell, M. D., Belfast  
Secretary, Raymond L. Torrey, M. D., Searsport

### Washington

President, Willard H. Bunker, M. D., Calais  
Secretary, Karl V. Larson, M. D., East Machias

### York

President, J. Robert Downing, M. D., Kennebunk  
Secretary, C. W. Kinghorn, M. D., Kittery

## COUNTY SOCIETY NOTES

### Hancock

A regular meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, March 9, 1949, with sixteen members present.

The meeting was called to order by the President, Dr. Crowe. The minutes of the previous meeting were read and approved. A brief discussion of some aspects of socialized medicine followed. Dr. L. L. Hagopian of Southwest Harbor, formerly an active member, was unanimously chosen an honorary member of the county society.

Movies on the following subjects were shown: 1. The Management of Fresh Traumatic Wounds. 2. Pneumonia in Children. 3. Urinary Antiseptics.

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Kennebec

A regular meeting of the Kennebec County Medical Association was held at the Elmwood Hotel, Waterville, March 17, 1949, at 6.30 P. M., with President Harold E. Small presiding. The record of the last meeting was approved.

The amendment to the By-Laws—Section 1, Chapter 1, as presented at the February meeting, was adopted by majority vote.

Dr. Hugh J. Matthews, Jr., of Gardiner, was elected to membership.

Dr. Charles Towne, for the committee, presented the following resolutions in memory of Dr. Theodore Hardy.

Whereas, Theodore E. Hardy, Doctor of Medicine, one of our most respected and beloved members, has been prematurely called to his Great Reward, and

Whereas, by his services to his country as a soldier, to his community as a physician and to his fellow doctors as a consultant, he has earned the title and the right to be known amongst us as one of our greatest servants, and

Whereas, by his innate qualities of perfect understanding of his patients' problems, and by his great interest in the students' welfare, and by his professional skill and ability to labor long and under adverse circumstances, he has attained distinction both in the profession and amongst the laity, and

Whereas, his greatest love was for his family, his home, and his fireside wherein he spent his happiest hours,

Therefore, Be It Resolved, that a copy of this resolution be incorporated in our records and a copy be sent to his family with our deepest sympathy.

Charles E. Towne, M. D.,  
Arthur H. McQuillan, M. D.,  
Kenneth W. Sewall, M. D.

On motion by Dr. John Reynolds the resolution was accepted to be spread upon the records.

Dr. Joe V. Meigs, of Boston, spoke on "Advances in Gynecology."

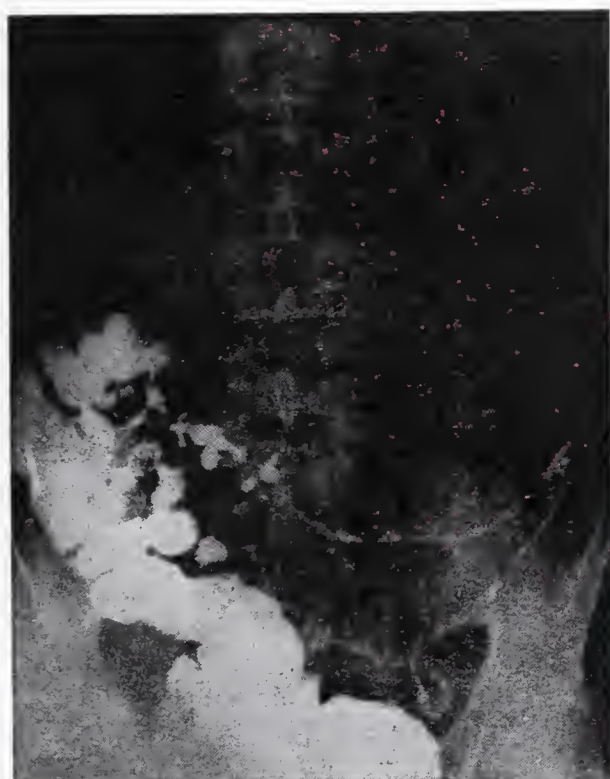
A. H. MORRELL, M. D.,  
*Secretary.*

*Continued on page 94*

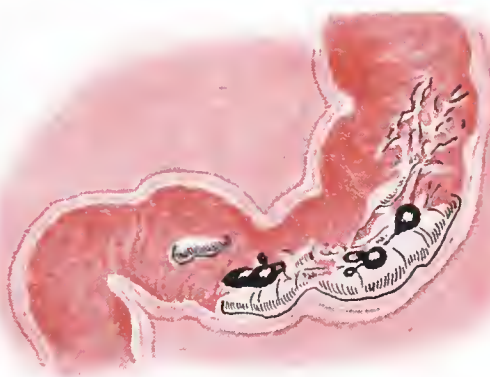
# TREATMENT OF CONSTIPATION IN mucous colitis

*“The treatment of the constipation in mucous colic does not differ from the treatment of uncomplicated constipation. It is, as always, of great importance to avoid irritating aperients, . . . The stools should be rendered soft and more bulky and therefore more easy to expel with . . . and unirritating vegetable mucilages.”*

—Hurst, A., in Portis, S. A.: *Diseases of the Digestive System*, ed. 2, Philadelphia, Lea & Febiger, 1944, p. 692.



MUCOUS COLITIS. In this x-ray is shown the distinctive string-like appearance of the descending portion of the lower bowel in mucous colitis, a condition frequently accompanying severe degrees of spastic or atonic colon. In the sagittal section is shown the over-secretion of mucus adhering to the bowel wall.



By providing soft, demulcent, water-retaining, mucilloid bulk, Metamucil—the “smoothage” treatment of constipation—promotes a return to normal elimination.



**METAMUCIL<sup>®</sup>** is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%), as a dispersing agent.

**SEARLE** *Research in the Service of Medicine*

G. D. SEARLE & CO., CHICAGO 80, ILLINOIS



*County Society Notes—Continued from page 92***York**

A regular meeting of the York County Medical Society was held at the Forefathers Spring House, Kennebunkport, Wednesday, March 9, 1949.

There were twenty-four members and four guests present to enjoy a well served steak dinner.

Drs. Carl Richards, Charles Kinghorn and James MacDonald were appointed as delegates to attend the meeting of the Council of the New England State Medical Societies, in Boston, March 27th. Dr. Richards was appointed as advisor to the Auxiliary Association.

Dr. Frederick R. Carter, Secretary of the State Association, spoke relative to the A. M. A. special assessment.

Dr. Stalter, of Portsmouth, New Hampshire, gave an interesting talk on "Vaginal Bleeding in Pregnancy."

C. W. KINGHORN, M. D.,  
Secretary.

**New Members****Kennebec**

(Admitted March 17, 1949)

*Hugh J. Matthews, Jr., M. D., Gardiner, Maine.*

**NOTICES****Physicians Are Needed in the Following Locations***Easton, Maine*

Seven miles from the Presque Isle General Hospital, and in the vicinity of Mars Hill, Westfield, and Fort Fairfield.

For information write to: Mr. W. A. MacPherson, First Selectman, Easton, Maine.

*Monson, Maine*

Village population 1,000, with two industrial plants, four surrounding towns without a doctor. Nearest doctor 12 miles south and 15 miles north. Doctor who has just left for special study in Bangor wishes to rent his house to a doctor. Neat, comfortable home in center of village with office in house but separate from living quarters.

For further information write: Mr. Dan E. Edgerton, Manager, Portland-Monson Slate Co., 465 Congress Street, Portland 3, Maine.

*Vanceboro, Maine*

There is a population of nearly 4,000, without medical attention in this area. Vanceboro is in the northern section of Washington County, located twenty-three miles from Route 1, and is the terminal for the Maine Central Railroad. There is one hospital within sixty miles on the U. S. side, and two hospitals within thirty miles on the Canadian side.

For complete information write to: Mr. William D. McAleney, P. O. Box 39, Vanceboro, Maine.

**Emergency Maternity and Infant Care Program**

Payment for maternity care and for care of infants under one year of age is still available under this program.

Authorization for the provision of maternity care was discontinued as of June 30, 1948. However, authorization for the provision of infant care prior to April 20, 1949, may still be issued under this program.

All bills for medical and hospital care must be submitted before June 1, 1949, to the Division of Maternal and Child Health, Department of Health and Welfare, Augusta, Maine.

**Department of Health and Welfare****Division of Mental Health****Clinic Schedule**

The Division of Mental Health offers psychiatric clinic service to children and adults in the following cities:

*Portland* — Health and Welfare Department, 178 Middle Street. Every Tuesday.

*Lewiston* — Out-Patient Department, Central Maine General Hospital. 2nd and 4th Mondays.

*Augusta* — Bureau of Health, Division of Mental Health. By appointment.

*Waterville* — Out-Patient Department, Thayer Memorial Hospital. 2nd Thursday, 4th Wednesday.

*Bangor* — Out-Patient Department, Eastern Maine General Hospital. 1st Wednesday afternoon.

Valentine School, Union Street. 1st Thursday.

A traveling clinic visits the following towns and cities at irregular intervals: Brunswick, Caribou, Farmington, Fort Kent, Houlton, Lincoln, Machias, Old Town, Presque Isle, Rockland, Rumford and South Paris. All clinics are staffed by a psychiatrist and psychologist.

Referrals may be made by private physicians, parents, families, social agencies, school superintendents, Department of Education, all divisions within the Department of Health and Welfare. Application blanks may be obtained from the main office of the Division of Mental Health — State House, Augusta.

Patients are seen by appointment only. Each child must be accompanied by a parent or guardian. Applications should be sent to the Director, Division of Mental Health, Department of Health and Welfare, State House, Augusta, where all appointments are made.

## From the Office of the Secretary of Defense Washington, D. C.

A direct appeal is now being made to the 8,000 young physicians and dentists who were trained at government expense under the wartime Army Specialized Training Program and the Navy V-12 program, and who have given little or no service to the Armed Forces, to volunteer for active duty in one of the three Armed Services.

An appeal is also being directed to the 7,000 physicians and dentists who were deferred during the war to complete their medical or dental educations at their own expense, and who have not served in the Armed Forces, to volunteer for active duty.

This program is a joint undertaking of the three Services, the American Medical Association, the American Dental Association, and other allied professional groups to fill the critical professional manpower shortage which faces the Armed Forces. Local professional groups are being furnished the names of the physicians and dentists in their particular communities who received professional training at government expense, and are asked to contact these men for personal interviews to inform them regarding the critical needs of the Armed Forces. They are asked to make regular reports to the Secretary of Defense on the result of the interviews.

Secretary of Defense James Forrestal said that by the end of July of this year, the Armed Forces will have lost almost one-third of the present number of physicians and dentists now in service. This will result in a shortage of about 1600 physicians and 1160 dentists. If this condition is allowed to develop the number will have increased to 2200 physicians and 1400 dentists by December.

Normal procurement procedure for professional replacements can not hope to supply the requirements for the Armed Forces. For example, during the month of January, 1949, only 30 physicians and 20 dentists were commissioned in the Armed Forces.

Should a shortage of professional manpower be allowed to materialize it could easily jeopardize the whole National Defense Program. It would mean the Armed Forces would not have enough physicians and dentists to furnish even a mini-

num of medical and dental service to the nearly 2,000,000 men and women in the military Services.

It is estimated that the government expended almost \$10,000,000 to educate, feed and clothe the 8,000 men who participated in the wartime programs.

If the present campaign for volunteers is unsuccessful consideration must be given to the following alternatives:

- (1) To ask for draft legislation covering physicians and dentists who have not responded to the call for volunteers.
- (2) To ask those men who served in World War II, and who hold reserve commissions, to re-enter for active duty in the Armed Forces.
- (3) To retain those men now on duty, but who are entitled to be relieved from the service upon completion of their respective tours of duty, until the shortage has been corrected.

Mr. Forrestal pointed out that this professional manpower shortage in the Armed Forces is so serious that legislation for a physician and dentist draft has already been prepared and is being held for possible use.

Mr. Forrestal announced also that Mr. Charles P. Cooper, his deputy for medical and allied professional matters, will conduct, through the Armed Forces Medical Advisory Committee, an active campaign for medical and dental personnel. The committee will also make an intensive study of the proper utilization of physicians and dentists, and of the workload in the Armed Forces, to insure against waste of precious professional manpower, and, in so far as possible, that men serve in an assignment commensurate with their professional skills and abilities.

On the Armed Forces Medical Advisory Committee, in addition to the Surgeon General of the Army, the Surgeon General of the Navy, and the Air Surgeon, are 11 distinguished civilians.

They are:

- Dr. Raymond B. Allen of Seattle, Washington.
- Dr. Francis J. Braceland of Rochester, Minnesota.
- Dr. Edward D. Churchill of Boston, Massachusetts.
- Dr. Michael DeBakey of Houston, Texas.

*Continued on next page*

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- Dr. Paul R. Hawley of Chicago, Illinois.
- Dr. Daniel F. Lynch of Washington, D. C.
- Dr. Richard L. Meiling of Columbus, Ohio.
- Dr. Maurice C. Pincoffs of Baltimore, Maryland.
- Dr. Howard A. Rusk of New York City.
- Dr. Walter H. Scherer of Houston, Texas.
- Dr. Paul Titus of Pittsburgh, Pennsylvania.

A further statement made by Mr. Forrestal reveals that he has sent personal letters to the 8,000 physicians and dentists who were trained at government expense under the A. S. T. P. or the Navy V-12 programs.

In addition to professional organizations, Secretary Forrestal is asking for the coöperation of veteran, civic and patriotic groups to insure success for the campaign by translating the needs of the Armed Forces to the public, and to assist in making direct contact with individual physicians and dentists whom they know are affected by this appeal. Deans of medical and dental schools and heads of hospitals also are being asked to give their support to the program.

Mr. Forrestal said, "We have an obligation to the millions of persons concerned. These include the men and women in the Armed Forces themselves, and the fathers and mothers

of these men and women who depend upon the pledge of this Government to take care of the medical and dental needs of those who serve their nation throughout the world."

**Forrest B. Ames, M. D., Maine Medical Association President, Enters Private Practice**

Forrest B. Ames, M. D., President of the Maine Medical Association, who has been roentgenologist at the Eastern Maine General Hospital for nearly twenty-six years, resigned as head of that department, April 1st. He has opened an office at 255 Hammond Street, Bangor, for the practice of roentgenology.

Dr. Ames is Councilor for Maine for the American College of Radiology and the North American Radiological Society, honorary professional organizations, and is a Fellow of the American Medical Association.

**HOSPITAL STAFF MEETINGS**  
**Open to the Profession**

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General	1st Monday
	St. Mary's General	2nd Monday
Portland	Maine Eye and Ear Infirmary	1st Tuesday
	Maine General	2nd Friday
	Mercy	3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters	2nd Tuesday
	Thayer	Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.

*Duodenal Ulcers—Continued from page 82*

if enough tissue was removed because so many of these patients are obstructed and have dilated stomachs.

CONCLUSION

1. 104 cases of duodenal ulcer were reviewed over the five-year period, 1943-1948, inclusive.
2. 79 cases or 71% were treated medically; 31 cases or 29% surgically.
3. Operations were performed on complicated ulcers. In order of predominance these were perforation, obstruction, serious hemorrhage and intractability.
4. The operative procedures performed included simple closure with interrupted sutures with or without omental graft, subtotal gastric resection and gastro-enterostomy in the aforementioned order of frequency.
5. A plea for better pre-operative and post-operative care, necessity of doing adequate subtotal resection and more vigilance in the post-operative follow-up of cases has been presented.

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Poland Spring, Maine

DONT MISS IT



*What Will We Do With The Doctor's \$25—Continued from page 90*

AUXILIARIES ARE EFFECTIVE

Obviously, the Women's Auxiliaries of the Medical Societies will be able to carry a big share of the load. As some of the California representatives will tell you in that State's campaign on the issue of compulsory health insurance, the women accomplished some of the most effective work done in speaking before women's organizations, in literature distribution, in securing endorsements and in keeping the club and women's editors enthusiastic on the issue.

COMMITTEES

It is important within the States to organize committees of doctors, both on the State and the County basis, who are able to give their time to the Campaign objectives, to handling speaking engagements and to working on endorsements.

Laymen may be added to committees as time goes along, as the work gets heavier and as laymen become more interested in the issue. Committees should be kept close-knit, however, and controlled by the profession's own Chairman. In any case, help from leaders outside the medical profession should be sought and welcomed. Not only will such aid lighten the load on doctors, but it will help build the broad public picture of the danger in socialized medicine, to every other element of our national life.

CONCLUSION

We recognize that A. M. A.'s permanent staff, headed by Dr. Lull, has a full load of work in just maintaining its normal activities. We will need a tremendous amount of help from them, however, and we have had many warm assurances of their desire to be in the front lines of the battle, as they have been for years past.

We visualize that they will serve in many capacities, giving the National Campaign the aid of their counsel and guidance, as required, providing the back-

ground material and the knowledge of the vast medical organization which we so badly need, flying into key States to carry the message to Garcia, maintaining lines of communication with all the State and County Societies, opening doors everywhere that are vital to the success of medicine's campaign.

The Public Relations Department of the A. M. A., under the very capable hands of Larry Rember and his staff, is going to have a tremendous task to perform. Its work will be vastly heavier as a direct result of the campaign. The States, incidentally, probably will see more of Mr. Rember, Mr. Bach and Mr. Doscher than ever in the past, for part of their work will be "trouble-shooting" in areas where the campaign at one time or another may bog down and require a jet-propulsion assist.

Their work will coördinate closely with the National Campaign and in many respects will overlap it.

They will make an intensified, affirmative campaign to drive home to the public the vital part the medical profession plays in the lives and the health of Americans. They will intensify their efforts to interpret factually—and dramatically—the work of the Departments of the A. M. A.—work that daily reflects highest credit on the profession and which has made the entire world deeply respectful of the A. M. A.

We are confident, gentlemen, that the Campaign which has been laid out is a practical, workable, effective campaign, and will produce the results we must have. We are confident that working together, the fight against government controlled medicine can be won — and that when it is over, medicine will have pointed the way for the whole Nation, at a time when the Nation might easily travel either road—toward a controlled economy or toward a free economy.

We sincerely believe that the individual doctors throughout the Nation, who have paid \$25 each to tell their story to America, will feel proud, as the story unfolds toward its conclusion — proud of their part in writing one of the greatest and most significant sagas of American history.

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# The Journal of the Maine Medical Association

Volume Forty

Portland, Maine, May, 1949

No. 5

## SOME OF THE SURGICAL PROBLEMS IN CHILDREN\*

D. H. R. LESTER, M. D., Schenectady, New York\*\*

The purpose of this paper is to leave with you a few impressions that time and experience has brought to us on the Children's Surgical Service at Bellevue Hospital. They are not radical, or necessarily new, but fundamentally sound by trial.

A child with acute abdominal pain is one of our chief concerns. If there is an associated history together with signs and symptoms that lead to a diagnosis of "questionable or probable appendicitis," the problem becomes the more complex, for mesenteric adenitis becomes one of the differential diagnoses to be considered. This condition has been shown to be a definite disease entity pathologically but not clinically. A careful search of the literature fails to give any chain of conclusive symptoms or signs that will permit of this diagnosis with any degree of certainty. Our experience bears this out. Hence, it has become our dictum that in the presence of an acute abdomen in which an acute appendix is to be included in the differential diagnosis, and no other cause can be demonstrated beyond a doubt, a laparotomy should be done with appendectomy planned.

Incidentally, the McBurney incision and cotton suture material is our choice in the uncomplicated appendectomy. In those cases ruptured and with abscess formation or generalized peritonitis, we usu-

ally remove the appendix and place the drains one to the pelvis, one to the abscess site, and one to the right gutter. The peritoneum is closed down to the common exit of the drains, and the remainder of the incision packed with vaseline gauze. Catgut is most frequently used in these cases. Healing is rapid and leaves a firm wound. Early ambulation and early feeding is a part of the post-operative plan, together with the anti-biotics. This method has led to 0 deaths in the last 125 cases of appendectomy of which 32 were ruptured.

Another cause of acute abdominal pain not uncommon among our admissions is that of intussusception. This, however, runs more true to form than do the cases of appendicitis. It presents four cardinal features:

- (1) Pain that is colicky, recurring at intervals not unlike that of labor.
- (2) Vomiting, and this is similar to the vomiting of other forms of intestinal obstruction.
- (3) The presence of a mass. The mechanics of intussusception must itself produce such, for there is forceful invagination of the bowel wall into the lumen of the bowel immediately ahead, thus forming at a localized point at least three layers of gut wall plus venous congestion and edema. This mass in the great majority of cases is palpable between bouts of pain.
- (4) Lastly, the current-jelly substance, a mixture

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.

\*\* Member of Bellevue Hospital Surgical Staff.



of blood and mucus, which may be passed by the child or seen on the examining finger when it is withdrawn from the rectum.

This condition, like other causes of intestinal obstruction, must be relieved early by laparotomy. The method of choice must be selected when the viability of the gut has been determined by direct inspection. It is, however, to be remembered that in general children do not tolerate resection well.

I would like to emphasize here again, as so many before me have done, that the digital rectal examination is to be regarded as important to diagnosis as the scalpel is to surgery.

Chest surgery has now, with improved anesthesia and surgical technique, been demonstrated to be safely applied to children. As a matter of fact, children withstand intrathoracic procedures as well as, if not better than adults.

Among the intrathoracic lesions that are commonly operated upon are the congenital tracheo-esophageal fistulae, esophageal diverticuli, mediastinal tumors and cysts, herniation through the diaphragm and eventration of diaphragm, drainage of mediastinal abscess and empyema.

Of the pulmonary lesions, bronchiectasis is one of the more recent conditions added to the list amenable to surgery. Resection of the involved segment or lobe is indicated first, because the disease by its very nature is one of progression and extension, hence early segmental resection is most desirable but surgery is not contraindicated until more than two or three lobes are involved.

An early diagnosis will aid materially in bringing about a favorable prognosis. To this end a foul breath associated with a chronic cough that produces copious foul sputum should make one very suspicious of bronchiectasis. This sputum may contain blood, and usually divides itself, upon standing, into three layers. The top is frothy, the middle is watery, and the bottom layer is dirty and pus-like. X-ray studies, including bronchograms to demonstrate the dilations of the bronchioles, are necessary to confirm, if not diagnose, the condition. Bronchoscopy aids materially in localizing the origin of the sputum, and at times can determine the cause, especially if a non-opaque foreign body is present. Persistent rales over the involved area or areas, together with clubbing of the fingers, are other suggestive physical findings.

Among the more common pulmonary lesions is the lung abscess which too often follows tonsillectomy or tooth extraction, or inhalation of a foreign body, or even pneumonia. True, many respond to chemotherapy and become entirely healed. These obviously need no surgical intervention. Hence, chemotherapy, penicillin, sulfa drugs, streptomycin, etc. should be given a reasonable trial first. But those cases that

persist by sign, symptom and X-ray findings, should be brought to operation as soon as definite progress has halted.

The conditions found at the time of thoracotomy can alone determine whether the abscess is to be drained, or excised by segmental resection, lobectomy or pneumonectomy.

Cysts of the lung as well as tumors, benign and malignant, and localized tubercular lesions lend themselves to surgery when carefully selected.

Another, not uncommon condition, that responds very well to surgery is that of Pectus Excavatum or Funnel Chest. This condition may by progression so restrict function of the heart and lungs as to cause death. It, especially among boys, causes no little self-consciousness and mental concern.

Fundamentally it is due to a short central tendon of the diaphragm which pulls inward the xyphoid and adjacent sternal segments.

By severing the costo-chondral junctions and partially fracturing the sternum, the diaphragm can be freed. The depression can then be elevated and maintained by suspending it from the adjacent external chest wall by a ladder-like apparatus.

The last subject that I would like to bring to your attention is that of fractures in children. Although their bones lack the brittleness of adults, their activities frequently carry the bending too far, hence the greenstick fracture. Our experience has confirmed the now prevalent opinion that these fractures being incomplete, must be completed under general anesthesia and held in circular plaster casings including the joint above and below the fracture. They must be held for a time longer than the comparative diameter of the bone would lead one to suspect. The exact time must be determined by X-ray evidence of callus formation. But this alone cannot always be relied upon. However, observations have shown us that, especially in weight bearing bone fractures, even in the presence of a large amount of callus, that fracture is not solid enough for full unassisted weight bearing until tenderness to deep pressure has disappeared.

It is remarkable how nature will, in the growing bone, bring about nearly perfect alignment and length of a fracture that at first seemed wanting in perfect reduction. This, in part, is brought about by reason of the fact that the periosteum may not be completely torn, and also because the epiphyseal lines are still active and respond to the stimulus of the mechanics of a short extremity. Open reduction is now uncommon.

The great majority of fractures of the shaft of the femur respond to five or six weeks of Russell trac-

*Continued on page 104*

# NEUROPSYCHIATRIC AND MEDICAL ASPECTS OF HEAD INJURIES\*

PAUL A. JONES, M. D., Union, Maine

I don't know just how a so-called neuropsychiatrist gets in on fractures, but I guess I am in on it. The great thing that I run into, relative to trauma and fractures, of course, is head injuries. I don't want to present my ideas as being the "cure-all and end-all" of head injuries. I simply have a routine which might be helpful, as a basis for other people who know more about treatment of injuries and head injuries in particular, to talk about and criticize. Anyway, I shall give you what I do, when I am faced with the problem of a head injury which might be something which would be applicable to the average general man or anybody who is faced with a head injury.

First and foremost, usually when a head injury comes in, the diagnosis and prognosis is all mixed up with this unfortunate habit that everybody has of giving everybody who is hurt morphine. The doctor doesn't know how much is due to the head injury or how much is due to the morphia that the patient has received, and doesn't know just what he is dealing with. By the responses, and the amount of dilatation of the pupils, I can give a rough guess as to how much intracranial pressure one is dealing with, because after all, in the emergency, which is what is being treated, the only thing that is really terribly important is how much pressure is present inside the head? Does it or does it not have to be relieved surgically?

To determine this, what I do is to make sure that the patient is kept in bed as quietly as possible. I usually put an ice bag to the head, and hot water bottle to the feet. I put them on an hourly chart of pulse, respirations and temperature and blood pressure, because all of the vital functions are a reflection of any impairment of the vital centers.

If the blood pressure goes way out of sight, in either direction, then something has to be done.

If the pulse goes above 160 or below 60, something has to be done.

If the respirations go much below 12 or much above 30, one realizes that something has to be done beyond what is being done, if the patient is going to live.

Medications for the patient should be given, as indicated. If the patient is restless, magnesium sulfate intramuscularly, usually those little 2 c.c. ampules every couple of hours, I believe, has two effects; one to dehydrate the patient, and two to sedate the patient.

If they get all out of hand, I go back to the old accident ward and give them anywhere from 5 to

10 c.c. of paraldehyde. I suppose that, fundamentally, isn't good, because it has a tendency to increase cerebral edema. The first two or three days, I limit their fluids very definitely. I like to see them dehydrated. This can be overdone, to be sure, and in the old days, we used to carry them on a week or ten days and the patient's water balance was vitally and badly upset. But, I believe in the initial phases, when the patient is unconscious and very sick, that they should be limited to sips of water. I usually put down an upper limit of 500 c.c. for the first three days.

As to the diagnostic lumbar punctures, they are all right; but, I don't know how much difference it makes, whether they are bleeding or not. The first three or four days, you are trying to save a patient's life, and I think any moving of them, or bundling them around and turning them unless one of the vital centers is affected and you have got to reduce the pressure by an emergency measure is poor judgment. It is more important to get the patient through this emergency, and my feeling is that the fewer lumbar punctures you do from a diagnostic angle, the better off the patient is.

And, certainly, the same thing is applicable to X-rays. The relatives, the insurance companies, the lawyers, most of the other doctors, are always badgering you to know whether the patient has a fractured skull. Well, ordinarily, I don't know. And I tell them that.

But, I say the same thing applies to X-rays as applied to diagnostic lumbar punctures. It is much more important to get the patients through a few days of compensation, than to worry too badly about moving them around and getting X-rays and rushing them to the X-ray table. Of course, you can take an A-P and a lateral without jiggling them around too much. But with the average patient with a head injury of any severity, you actually don't know whether they have a fracture of the cervical spine or thoracic vertebrae or what. I think the less the patient is moved the better his chances of survival are.

It is better to procrastinate with these injuries until you have the patient on some kind of a basis of compensation that allows their being transported, that allows their being operated upon in a better physical condition than they would be when they first come in.

The complications that occur are these. One is a really massive hemorrhage. There isn't anybody who is going to do much about that, if the hemorrhage is massive and involves brain tissue itself. If it is in the meninges, ordinarily this kind of hemorrhage will

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.



## SURGICAL ASPECTS OF HEAD INJURIES\*

GEORGE L. MALTBY, M. D., Portland, Maine

There are several things that Dr. Jones brought up and I may disagree with him a little bit on some of them. I think that in a symposium of this type, it is important to talk about the non-operative treatment of head injuries, even though I am supposed to be presenting it from the neuro-surgical point of view.

Between 66 and 70 per cent of all head injuries never come to surgical intervention. That is the type of patient all of us see, no matter what type of work we are doing.

To begin with, what about the simple lacerated scalp? Usually, they are treated very well. They can be treated poorly, and, in accident wards, we often see patients whose scalps are not thoroughly debrided and not thoroughly irrigated, merely a few sutures are put in, and later on we find a fracture under the laceration.

I think it is important to adequately clean a reasonable area around the laceration, and then with a sterile instrument or the gloved finger get some idea as to whether the bone is injured underneath.

Now, in head injuries, there are numerous pathological classifications of what happens to the brain, when there is a blow on the head. Perhaps Dr. Earl Walker and Dr. Monro's classifications are somewhat dictatorial, but basic.

They define concussion as purely the loss of consciousness, without residuals. That type of patient is really never seen in the hospital; that is the patient that falls and hits his head, is dazed, loses consciousness for a few minutes, such as in a football game, and is all right afterwards. If they have residuals, in the way of headaches, they are probably more than the simple concussion.

The term "concussion" has become all inclusive in the medical, legal and insurance fields. It means everything from simple concussion to severely lacerated brain, with or without cerebral hemorrhage.

Then, the next more serious injury to the brain is the so-called contusion of the brain, which means the brain is contused, the way any other part of the body can be contused. With a bruise of the brain tissue, there is usually bleeding into the spinal fluid and secondary swelling of the brain itself, causing headaches, and increased cranial pressure.

The next and more serious type is the so-called laceration of the brain and the clinical differential between severe contusion and laceration is difficult because, actually, the only way of being sure of

whether the brain tissue itself has lost its continuity and become lacerated is either at the operative table or the post-mortem table. Severe lacerations of the brain fall into the group of allowable mortality in head injuries. Those are the patients who come in and live a few hours in the hospital in deep coma, with grossly blood fluid.

In several large series, most of the men agree that between 15 and 17 per cent of the severe head injuries will die no matter what your ideas about treatment are.

Now, what are some of the things about treating the unconscious patient who comes to the hospital? I think that above all, perhaps the most important thing about treating the unconscious patient with a head injury is an air-way. They need oxygen, and we know that all tissues are very sensitive to anoxia, but of all tissues, the brain is the most sensitive, and the injured brain is that much more sensitive than a normal brain. It is very important to give adequate air-way to these people.

So often, you come into the accident ward and see an unconscious patient, lying flat on his back, with his tongue in the back of his throat, and blue as your hat; then you turn them over and they improve, and that is all you have to do for the head injury to get them well. I think that along with that, you should use some type of added oxygen. I like a nasal catheter. Some people prefer oxygen tents. The reason that I don't like the oxygen tent in an unconscious patient is that if your nursing help is not adequate, there seems to be a feeling among the nurses that once a patient is in an oxygen tent, you can't take them out. So that once they get them in an oxygen tent, the nursing part of it tends to be forgotten, in the unconscious patient. I, personally, like the catheter, with frequent turning. This problem of the air-way, to me, is the most important single factor.

Where I may differ with Dr. Jones is on the question of lumbar puncture. Dr. Jones is near the middle. I am a little more in the middle. He is a little on Dr. Dandy's ideas that the head injuries should be left alone and nothing done in the way of a dehydration or lumbar puncture. I think that almost every patient with a head injury should have a diagnostic lumbar puncture.

On the other hand, I don't agree, entirely, with the Monro idea of a lumbar puncture every three hours; I don't think that it accomplishes much. I don't think you accomplish much in the way of decompression, over a period of time, by repeated punctures. However,

\* Presented at the 94th Annual Session of the Maine Medical Association, June, 1948.

I don't think that you are really going to know the pathological process in the brain, unless you know the pressure and what the fluid looks like. That is important from the point of view of possible surgery later.

Let us say the patient is unconscious, and he seems to get better and then 48 hours later he goes into a coma again. We know his fluid was clear before and that something has gone wrong. You do a lumbar puncture again, and you find an elevated pressure, and the fluid clear. That patient very likely has bleeding. I think that you get definite help from a diagnostic lumbar puncture.

And, when I say lumbar puncture, they can be done the right way and the wrong way. Medical men have been indoctrinated with the idea that when you do a lumbar puncture, you have got to do dynamics; you have got to press on the jugular veins, etc. But, if you think about it, there is no reason for dynamics. You are increasing the venous pressure, and secondarily slowing the arterial circulation to the brain.

While it is not an important point, it can, in a patient on the verge of cerebral decompensation cause a lot of trouble.

Now, again, dehydration, I personally do not believe in dehydrating patients; on the other hand, I don't believe in drowning them, either. I think that has been carried to some extremes in some clinics, with too much fluid. I believe that a patient should have 2,000 to 2,400 c.c. of fluid in 24 hours, whether in a coma or not. If there is a high fever, the patient should have more.

I believe that there are only two indications for acute dehydration, and, if you are going to dehydrate them, then do it to the limit.

If the patient has a head injury or a brain tumor, and the history and the findings suggest extra-dural hematoma, it is going to take two or three hours to get your operating room set up. You may be able to dehydrate the patient long enough to allow you to take out the extra-dural hematoma, and you may be able to save them.

Now, as to the X-rays, I agree entirely with Dr. Jones. I see no excuse for X-rays in head injuries, except in two instances. One of them is the compound depressed fracture of the skull; you are going to have to do something relatively soon about it. In that patient, you would like to know how many pieces of bone are in the brain, and where they are located, so that you don't leave a few pieces. All you need is an X-ray on the stretcher on the way to the operating room. The other instance is when there is a question as to whether there is a severely contused or lacerated brain or an extradural hemorrhage. You can't quite make up your mind. If you take a single lateral of the skull, on the stretcher, or in bed, you may find an extensive linear crack crossing the line of the middle

meningeal artery. If you find that, I think that is another point in favor of your diagnosis of extradural hematoma, and maybe the thing that makes you decide you had better get in and find out pretty quickly about the patient.

As far as routine X-rays are concerned, lawyers and insurance companies will call you three or four times a day saying that the family wants to know, and you try to tell them, and you just have to take the responsibility on yourself of not doing it.

If you try to X-ray unconscious patients and turn them over two or three times, they will vomit and possibly aspirate vomitus. They have had patients at the Maine General Hospital die in the X-ray Room during the procedure of trying to get X-rays. Then when you get the X-rays, they are usually inadequate.

You have to wait until the patient is ready to co-operate; the fracture will still be there three weeks or a month from now. And you will have it by the time the lawyers go to Court, and they find a linear fracture, and everybody is happy. But, you haven't jeopardized the patient's immediate health while he has been seriously ill.

Many of these severe head injuries have a central hyperthermia; that is, their central heat regulating mechanism has been injured along with the rest of the brain. The House Staff and a great many doctors have been well inculcated in the treatment of the circulatory shock. So the patient is treated with two or three blankets and a hot water bottle and a quarter of morphine. They are treating for shock. You say; "What is this patient's temperature?" You check the rectal temperature, and it is 106. So the treatment of surgical shock per se is not the treatment of cerebral shock and hyperthermia. You can do more harm by some of the methods that are excellent in treating surgical shock, than you can do good. That patient should have a wet sheet and a fan blowing over him.

Sedatives are always a problem. I like paraldehyde, in spite of its odor. We have used sodium luminal intramuscularly. We use restraints, when necessary.

I think that one of the most important things in taking care of a very severe head injury with unconsciousness is good nursing help.

In mentioning fluid, I forgot to say that after the first three or four days, if the person remains unconscious, without an adequate intake, it is a good idea to put a stomach tube in. Again, you have got to be awfully careful about the nursing help and avoid aspiration.

Those are some of the points in the treatment of the non-operative group.

Let me briefly run over some of the complications that may become operative. All the patients are non-operative to begin with. What you are watching for in the non-operative group is for the recovery or the signs that indicates something surgical has to be done.



There, again, I didn't mention the importance of a careful neurological examination, including following changes in the pupils. I think most neurosurgeons throughout the country have given up the operation to relieve pressure. I don't know how, in a diffuse edema of the brain, you can make an opening big enough to relieve the cranial pressure. You open it, and you have necrosis in the part bulging through. You get a vicious cycle.

I feel very sure that sub-temporal decompression is

a procedure of the Dark Ages in head injuries. I think it is even better to do lumbar puncture.

I shall not go into any of the technical aspects of handling these surgical complications, because it isn't important here, but I do want to say this. Most general surgeons don't feel too badly if they find the appendix is all right. At least, they can sleep better when they have it out. We feel the same way about our work; it is better to have a burr hole, and know a blood clot isn't present than to have an extradural or subdural hematoma found by the pathologist.

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*Some of the Surgical Problems in Children—Continued page 100*

tion. The fracture is checked frequently, daily for the first week, overpulling being avoided. In the event that alignment has not been satisfactorily accomplished in five days, an anesthetic is administered to the patient in his bed with the traction apparatus intact, and the fragments manually manipulated into satisfactory position. The reason for the five-day limitation is first, to allow the traction to provide muscular relaxation thus aiding manipulation. Secondly, because repair has not proceeded to a point that will render manipulation too difficult.

Fractures of the tibia or fibula alone respond well to correcting mal-alignment and encasement in plaster from toes to upper thigh with foot at a right angle and knee in about 20° of flexion.

Tibia and fibula as well as radius and ulna fractures, give the greatest difficulty in obtaining and maintaining alignment and apposition. But even here only a rare open reduction is required. Usually general anesthesia, manipulation under fluoroscopic or X-ray control, will suffice to produce adequate contact and alignment for not only a good functional but also good cosmetic result. The extremity, if upper, is encased in plaster from distal palmar crease to above mid-arm, with elbow at right angle and forearm in supination, to separate the parallel bones, and the wrist is held in line with the forearm. Healing generally occurs within six weeks. If it is the lower extremity, the plaster casing is applied with the position as that described for tibia or fibula alone.

Fractures of the radius or ulna alone or together, if incomplete, are completed under general anesthesia, and alignment rendered satisfactory. A plaster encasement is applied as described above except that the forearm is put up in mid-pronation if the fractures involves only one bone.

Humeral shaft fractures rarely require more than the hanging cast. One exception is the fracture of the supra-condylar portion of the humerus, which is treated by traction-countertraction as set up by the Dunlop method. It is remarkable the reduction that is accomplished by this means, and the functional result is no less than amazing. Part of this ability of recovery is one of the gifts of youth.

Fracture of the clavicle, said to be the most common of all fractures in children, is usually of the type that a simple figure of eight bandage of gauze with the axillae well padded, applied for three weeks, will suffice.

I hope that from this brief resumé you will have gained some help, even if only to confirm your opinions, or to show you that even in a large center with almost unlimited facilities, problems are ever present and the exact answer too often wanting.

You, who are general practitioners, will see most of these conditions first. Your prompt, conscientious and accurate attention is of inestimable value in bringing that case to a successful conclusion. This credit you earn, and this credit you deserve.

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Vaccination with BCG must not be regarded as a substitute for approved public health measures nor can the vaccination of the general population be recommended at the present time except for carefully controlled investigative programs, several of which are now under way.—*Nat. Tuberc. A. Bull.*, March, 1948.

Time lost in a case of tuberculosis can never be regained. The patient often looks fit; he may be well nourished and have no physical signs; but he has a history to relate or he would not have sought advice. It is upon suggestive symptoms alone that prompt radiography must be ordered.—Peter Stradling, M. D., *Brit. M. J.*, Nov. 6, 1948.

## CLINICAL EVALUATION OF PYRROLAZOTE AND ORTHOXINE IN ALLERGIC DISEASES\*

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Attention was early directed by Dale and Laidlaw to the similarities of the effects of histamine with the symptoms of anaphylactic shock. Although histamine may not be the only substance responsible for the manifestations of anaphylaxis and allergy, the evidence that this substance plays an important role has accumulated. Such a hypothesis for the manifestations of allergic reactions has at least resulted in the development of compounds effective against most of the pharmacologic effects of histamine. Such antihistaminic agents have also been found valuable in human therapy of allergic diseases. This subject and the effectiveness of known antihistamines have been adequately reviewed by others.

This report involves the pharmacology of a new antihistamine called Pyrrolazote, or B-pyrrolidene-ethyl-phenothiazine hydrochloride. The results obtained with this compound in animal experiments indicate that it is a specific histamine antagonist equal in potency to the other most active compounds available, of which Pyribenzamine is an example, and that it has a much lower toxicity.

In considering Pyrrolazote, a brief summary of other compounds in this relatively new group of potent antihistaminic drugs may be desirable.

Quite a large number of compounds have been found to possess histamine-antagonizing properties. With a few exceptions these are all of very similar chemical structure, being for the most part ethyl amine derivatives. Although some of the amino acids (histidine, cystine and arginine) were found to have the property of antagonizing histamine, their activities in this respect were of such low degree that effective amounts were too toxic.

In recommending this compound the results of pharmacology experiments showed the following: (1) Specific antagonism of histamine as determined by several methods, both *in vitro* and *in vivo*. (2) A high order of activity against anaphylaxis as tested in sensitized guinea pigs. (3) Possible longer duration of effectiveness after injection. (4) Much lower acute toxicities than for other antihistamines of similar potency, as Pyribenzamine. (5) Safety for human use, as shown by both acute and chronic toxicity determinations.

Pyrrolazote is demonstrated to be a potent antagonist to the following pharmacological responses elicited by histamine when compared with Pyribenzamine. (a) Vasodepression (cats and dogs), (b)

Spasms (isolated smooth muscle method of Magnus), (c) intoxication and broncho spasm in guinea pigs.

By isolated smooth muscle tests and prevention of histaminic intoxication by aerosol, Pyrrolazote is longer acting than Pyribenzamine.

The compound possesses antianaphylactic properties as demonstrated *in vitro* (Schultz-Dale Phenomenon) and *in vivo* in guinea pigs.

In distinction from Pyribenzamine and other antihistaminic agents, Pyrrolazote apparently does not enhance the pressor effects of epinephrine.

Acute toxicity, as determined by a comparison of the respective LD<sub>50</sub> in four species by parenteral and oral administration. Both antihistamines produce severe local tissue damage when administered parenterally to laboratory animals.

Chronic oral toxicity studies in rats reveal that a dose of 10 mg. per kg. five days each week for ten weeks is tolerated without ill effects. The only histopathologic finding was degenerative fatty infiltration of the liver, and this was *absent* at 10 mg. and moderate at 25 mg. At 75, 150 and 300 mg. per kg. doses, more marked changes in the liver were observed. But such doses on a weight basis are some twenty to sixty times the maximum doses that seem indicated in human therapy.

Even at a daily dose, therefore, of 25 mg. per kg. in rats, of all the tissues examined only the liver sections showed changes from the controls suggesting some fatty infiltration. On a weight basis, the 10 mg. per kg. dose is equivalent to a human dose of about 500 to 700 mg. daily, while the 25 mg. per kg. dose is equivalent to a daily human dose of 1250 to 1750 mg. This lack of abnormal pathology at the 10 mg. dose in rats after continuous daily administration, together with manifestation of no untoward effects after daily doses of 3 and 8 mg. per kg. in dogs, indicates that Pyrrolazote is safe for oral administration to humans at the dosage range of 50 to 200 mg. daily.

Since the release of this drug for investigational purposes coincided with the ragweed pollen season, I had an excellent opportunity to observe the effects of Pyrrolazote in my private and clinic patients during this period. A total of 88 patients were followed long enough to evaluate the results of this drug; the oldest 70, while six children, 9 to 10 years, were in the younger age group. One size tablet, 50 mg. was used for all of the patients. Four of the six children obtained no relief with the drug—one suffered severe nausea.

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In those patients that obtained relief, they did so within 15 to 30 minutes, and were unusually comfortable repeating the 50 mg. dose at five to six-hour intervals. A few patients were able to take a tablet at bed-time, and rest all during the night, free from all symptoms, with a single 50 mg. tablet. Those patients suffering with Bronchial Asthma showed no particular improvement with this drug, and here it was difficult to evaluate its use with the Pyrrolazote medication. One patient with migraine had relief from the attack with the medication, but suffered such pelvic cramps that the medication had to be discontinued. The patient also stated that this reaction followed the use of Pyribenzamine in similar doses.

The side effects of Pyrrolazote were quite disconcerting in 24 cases. Severe nausea required the withdrawal of the drug in 10 cases, while milder nausea, with relief of symptoms enabled 10 other patients to continue with the drug. Three patients suffered severe dizziness and 10 with marked drowsiness, and the drug also had to be discontinued in these cases. Probably some of these side effects could have been minimized if a smaller dose tablet were used.

In conclusion, a comparison with other antihistamines reveals, that Pyrrolazote has not been as efficacious with the majority of patients as other antihistamines on the market. Several patients who could not tolerate other antihistamines did obtain excellent relief with this drug.

ORTHOXINE

Orthoxine is a registered trademark of the Upjohn Company for a new synthetic amine B-ortho-methoxyphenylisopropyl methylamine hydrochloride. The sympatho-mimetic amines have found a wide field of usefulness in medicine, particularly in the control of allergic diseases.

Following the discovery of ephedrine, further studies have developed many new and useful therapeutic agents. It is evident that a bronchodilator substance, comparatively free from pressor and central nervous stimulation effects, would be valuable for clinical investigation in Asthma.

Orthoxine was selected from a large number of synthetic amines because when compared to ephedrine sulphate in a large series of animal experiments, Orthoxine has (1) an oral activity comparable to ephedrine, (2) carries no central nervous system excitatory effects, (3) has no pressor action; in fact appears to be slightly depressor and (4) exhibits no cardiac effects of altering pulse, either slowing or accelerating.

	PYRROLAZOTE			
	Excellent	Good	No Relief	
Hay Fever	40	13	18	9
Bronchial Asthma	15		5	10
Migraine	4		1	3
Vasomotor Rhinitis	15	2	4	9
Neurodermatitis	8		1	7
Urticaria	6		4	2
Total	88	15	33	40

Side Effects	
Nausea	20
Drowsiness	15
Dizziness	3
Pelvic Cramps	1

Othoxine is a pure white crystalline substance with a molecular weight of 215.5, and a melting point of 126.5°C. It is soluble in water, alcohol, ether and slightly soluble in ethyl acetate. It is insoluble in petroleum, ether, benzene and toluene.

For oral use the salt was furnished as a compressed scored tablet 100 mg. (1½ grains). These tablets are included in the abergic line of tablets which are formulated to contain excipients, diluents and granulating substances such as arrowroot, starch, cane sugar and talc, that are less likely to cause allergic reactions than corn starch, lactose and tragacanth, commonly used in tablet manufacture.

One hundred mg. was found to be the dose in half of the adult cases under my observation, while 50 mg. seemed to control the symptoms effectively in the remaining group of cases who were relieved. Relief was obtained in 15 to 30 minutes and lasted 3 to 5 hours.

No arrhythmias were noted. No unusual increase in blood pressure was observed, even in the Arteriosclerotic and Hypertensive group. The side effects included drowsiness on 5 occasions, 1 insomnia, 1 weakness of the legs. The absence of G. I. complaints, headache, nervousness and pressor effects was notably observed. There were no abnormal urinary or blood findings.

The majority of patients given this drug were receiving specific immunization at that time.

I was particularly impressed with the use of this drug in patients who have resorted to all types of ephedrine-like and antihistamine drugs over the past few years, particularly in the old-age group. There were no urinary complaints, sometimes a stubborn complication of those using ephedrine.

I reserved the use of Orthoxine specifically in patients with Bronchial Asthma during the similar period of clinical investigation with Pyrrolazote. A

group of 75 patients are included in this group; the youngest 17 months—the oldest 80 years. The side effects were kept at a minimum, even with 100 mg. doses of the drug. I particularly used Orthoxine on patients who had no relief with all other medication, and who resorted to adrenalin on many occasions for relief of their symptoms. I was impressed with rapid absorption and clinical relief which effected some of these patients. Only one patient complained of insomnia, and the drug was discontinued. Two other patients suffering with severe drowsiness also omitted the drug because of this side effect. One patient complained of weakness of the legs, severe headaches and unusual itching of both legs following its use in 20 to 30 minutes.

Twenty per cent of the cases received no relief, particularly when the attacks were well developed. The excitatory effects of this drug was revealed to me in the following cases. A 17-month-old male infant, suffering with Bronchial Asthma intermittently for a 6-month period, developed a mild bout of wheezing one evening and was given 25 mg. of Orthoxine for the first time. He was wheezing mildly, lying quietly in his crib. About 15 minutes after the Orthoxine was given, the infant screamed and became quite excitable, thrashing around wildly. His asthma was definitely aggravated. This episode lasted for nearly one-half hour. A second dose of Orthoxine given two hours later produced the same effect. The second patient was a 79-year-old male, who suffered with Bronchial Asthma for 25 years. He was hospitalized for three weeks and improved under Orthoxine in doses of 100 mg. four times daily, during this period. He had slight drowsiness with the medication. Under the same medication at home, the patient awoke confused and delirious early one

morning. He became unmanageable for nearly one hour, at which time his sensorium returned. Orthoxine was discontinued and the patient had no further episodes.

Wittich<sup>1</sup> reported the results of treatment in 175 allergic patients with Orthoxine. He felt that results were superior in all cases to those with ephedrine alone. Gastro-intestinal allergy was often alleviated apparently by relieving smooth-muscle spasm. He reported the use of 100 mg. doses of Orthoxine aborting allergic headaches if taken early. The greatest benefits were obtained when used in conjunction with avoidance and immunization methods.

SUMMARY

Orthoxine alone has been found to be a valuable aid in the treatment of those allergic diseases benefited by ephedrine, with the advantage of being comparatively free from side reactions. In addition, the use of this drug allows one to continue skin testing the patient without disturbing the effects of the test.

The drug may be safely used in the older-age group, particularly with those patients who have resorted to many other ephedrine-like preparations with temporary or fleeting relief.

The distressing G. I. symptoms so often encountered in other drugs was notably absent here. It is well tolerated and may be effectively used in children.

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There are many features in a good tuberculosis control program, but all of them are based on the fundamental principle that tuberculosis is contagious, and that the patient who has the germs in his sputum, or who shows X-ray evidence of progressive disease of the lungs such that the sputum is likely to become positive, must be isolated from his family and from the community in a tuberculosis hospital or sanatorium where strict bed-rest, good diet, and special surgical procedures in selected cases, can be provided to stop the advance of the disease and render him non-infective.—Miriam E. Brailey, M. D., *Baltimore Health News*, Nov., 1948.

One of the most significant recent advances of the improved tuberculosis case-finding procedure is the program to give a routine chest film to all hospital admissions. As people enter hospitals for reasons of illness, a higher incidence of tuberculosis than that found in the general population may be expected. The U. S. Public Health Service reports this to be twice as much. Approximately 10 per cent of the general population are annually admitted to public hospitals. This large, easily accessible group offers an ideal opportunity for the discovery of unsuspected tuberculosis.—S. A. Holling, M. D., *Canad. J. Pub. Health*, Jan., 1949.



## RELIEF OF ASTHMATIC SEIZURES WITH MICRONIZED EPINEPHRINE 1:1000

\*A. L. MAIETTA, M. D.\*

With the advent of aerosol therapy, the treatment of bronchial asthma has become eminently more successful. Barach and Garthwaite<sup>1</sup> (1947) noted considerable improvement in asthmatics when treated with continuous nebulization of 1% neo-synephrine followed by 1:100 epinephrine. Segal<sup>2</sup> (1947) employed Isuprel hydrochloride 1:200 as a therapeutic aerosol in relieving the dyspnea of an asthmatic attack. Taplin and Bryan<sup>3</sup> found micronized Benadryl used alone or mixed with vasoconstrictors, such as neo-synephrine or Propadrine, to be effective symptomatically in asthma.

In a group of 73 asthmatic subjects, aqueous epinephrine hydrochloride 1:1000, aerosolized in  $\frac{1}{2}$  to 1 c.c. doses, has proven to be a most remarkable therapeutic agent in consistently relieving asthmatic seizures. As early as 1929, Camps,<sup>4</sup> in England, recommended the inhalation of epinephrine by spraying it into the tracheobronchial tract as a valuable agent for the relief of the asthmatic paroxysm. Employed as a spray, it proved relatively ineffective due principally to the large size of the droplets which were limited to the posterior pharyngeal wall. However, its administration as an aerosol mist, permeating the entire pulmonary mucosa, is not only superbly efficacious but also non-toxic, being unattended with side reactions.

### MODE OF ACTION

Administered as an aerosol under oxygen pressure with a flow of oxygen of 6 liters per minute, epinephrine hydrochloride 1:1000 exerts a distinctly beneficial influence upon the functional bronchostenosis of an asthmatic paroxysm. It appears to have a two-fold action. Its primary and most important action is that of a topical vasoconstrictor; its secondary effect that of a bronchodilator. Delivered topically as a fine cloud which is readily inhaled, aerosol epinephrine 1:1000 instantaneously exhibits its primary action by relieving the mucosal edema of the bronchial tree, which, often times, is the most prominent factor in recurrent acute or chronic bronchial asthma. As a result, the asthmatic cough becomes more productive, and tenacious, inspissated mucus is more easily dislodged. Within a few minutes, through the mechanism of absorption, it exerts its secondary action by stimulating the bronchodilator (sympathetic) nerve endings which overcomes the excessive constriction of the bronchioles (bronchospasm).

The beneficial action of epinephrine 1:1000 aerosol

is greatly enhanced by the complete absence of side reactions. Blood pressure levels, determined before and after each treatment, were not disturbed. Palpitation, forceful heart action (heart pounding), restlessness, and tremors did not occur. The character of the pulse was unaltered. Following treatment, exhausted patients were not kept awake when much needed sleep was desired. The mucous membrane of the throat, the point of greatest impact during vasoconstrictor inhalation therapy, remained moist. This is highly desirable because a dry mucous membrane initiates coughing which, in turn, further aggravates the asthmatic state. There appeared to be no appreciable secondary vasodilation from its local action principally because of its low concentration and the vast area through which the mist is diffused before being finally deposited upon the bronchial mucous membrane.

### RESULTS

Seventy-three asthmatic patients obtained excellent results with aqueous epinephrine hydrochloride 1:1000 employed as an aerosol medicament. It was particularly effective when oral and parenteral medications either failed or were partially effective. Depending upon the age and weight of the patient, the dose was  $\frac{1}{2}$  to 1 c.c., aerosolized as indicated, but not oftener than every 4 hours. The symptomatic relief was immediate and lasted from several hours to days. There were 32 males and 41 females. Their ages ranged from 4 to 67 years. Sixty-six patients were ambulatory and 7 were hospital cases. Of these, 33 had acute asthma, 8 recurrent acute asthma, 25 chronic asthma, and 7 status asthmaticus. As a group, they received a total of 655 epinephrine aerosol exposures, an average of 9 per patient, without any ill effects.

*Vital Capacity.* In all cases, the beneficial effects were apparent after only 6 to 10 breaths. There was a substantial increase in vital capacity. The dyspnea, substernal constriction, and wheezing disappeared gradually and, by the end of the treatment, normal breathing had been resumed.

*Acute Asthma.* This group consisted of 33 patients who had symptoms for several days despite the usual antiasthmatic medications. In many, the most prominent symptom was a distressing non-productive cough rather than the prolonged expiratory wheeze. The cough, due to mucosal edema of the bronchial tree, occurred in paroxysms and either initiated or aggravated wheezing. These patients received a total of

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117 vasoconstrictor aerosol exposures, an average of 3.5 per patient. Treatments were given daily. All experienced excellent results. Not invariably following each treatment, mucoid or mucopurulent sputum was expectorated easily.

*Recurrent Acute Asthma.* Eight patients were included in this group. All had recurrent bouts of asthma for quite some time. The periods of freedom between paroxysms were relatively brief. Nocturnal asthma was a prominent feature. Coughing, wheezing, and dyspnea only partially responded to antiasthmatic preparations. Sixty epinephrine aerosol treatments were given to this group, averaging 7.5 treatments each. Exposures were given daily or twice daily. Thick, tenacious sputum was dislodged and expectoration was facilitated. The symptomatic relief was excellent.

*Chronic Asthma.* The 25 patients classified in this group had asthma for several months to years. They were never completely free of their symptoms and were particularly distressed with nocturnal asthma. Exertion and coughing invariably aggravated their asthmatic state. Expectoration of a thick, mucopurulent sputum was a prominent feature. Antiasthmatic palliatives were inadequate. These patients received a total of 340 epinephrine aerosol administrations and averaged 13.6 per patient. Treatments were given once or twice daily as indicated. One patient received 90 exposures, treatment often being given every 4 hours without any ill effects. For this patient, epinephrine aerosol proved to be a most successful therapeutic agent. All the patients in this group received gratifying relief. Those, uncomplicated with structural changes (emphysema and pulmonary fibrosis), had a more lasting effect. Expectoration of thick, mucopurulent sputum often became profuse. At first, the beneficial effects lasted for several hours and, as more epinephrine exposures were accepted, the chronic symptoms improved to a point where oral antiasthmatic therapy became more efficacious.

*Status Asthmaticus.* Seven patients were afflicted with severe, constantly acute asthma. Ephedrine orally, epinephrine parenterally, aminophyllin intravenously, glucose in saline infusions, and oxygen had

proven grossly inadequate. Extensive mucosal edema and bronchial plugging were responsible for the gravity of the symptoms. These patients responded gratifyingly well to epinephrine aerosol therapy. Each experienced an immediate and sustained remission that lasted for several hours. With each treatment, there was a great increase in vital capacity and a marked diminution of the dyspnea usually accompanied with an abundant expectoration of thick, tenacious, mucopurulent sputum. As a result of epinephrine 1:1000 aerosol therapy, all the cases of status asthmaticus were controlled within 24 to 48 hours, representing a significant shortening in the duration of this distressing affliction. Concomitantly with improvement, the symptoms became more responsive to other suitable antiasthmatic medications. Aerosol treatments were administered every 4 hours and, with amelioration, once or twice daily as required. As a group, these patients received 138 exposures and averaged 19.7 per patient.

SUMMARY AND CONCLUSIONS

Aqueous epinephrine hydrochloride 1:1000, employed as an aerosol, consistently relieves the asthmatic paroxysm.

As an aerosol, its primary action is that of a topical vasoconstrictor, relieving the mucosal edema of the bronchial tree and dislodging inspissated mucus; its secondary effect is that of a bronchodilator, overcoming the bronchospasm by relaxing the excessive constriction of the bronchioles.

As a result of this therapy, 73 bronchial asthmatic patients obtained immediate symptomatic relief which lasted from several hours to days.

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It is now generally accepted that what the tuberculin test is to the establishment of the presence of infection, and the X-ray to early case finding, bacteriological examination for tubercle bacilli is to the determination of clinical activity.—Francis J. Weber, M. D., *Pub. Health Rep.*, Sept. 3, 1948.

A rehabilitation program of the tuberculous cannot be accomplished in a short time, nor can it be

done by any one person or agency. It is a long and arduous process that requires careful planning and organization to be lasting and that needs the cooperative effort of all groups, both official and voluntary. But it is a program that will mean tremendous saving both in dollars and lives — a program that is well worth all the effort that can be put into it.—Edward N. Chapman, M. D., and Helen E. Wilson, *Rocky Mountain M. J.*, Jan., 1948.



## DERMATOPHYTOSIS

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Dermatophytosis refers to fungous infection of the keratin found in nails, hairs, and stratum corneum of the epidermis. This plant parasitic disease is caused by three genera of fungi: *Microsporum*, *Epidermophyton*, and *Trichophyton*, of which there are about ten important pathogenic species. Depending on the location, it has been called "ringworm," "jock itch," and "athlete's foot." It is the purpose of this paper to review and discuss important advances in this common group of skin diseases.

Through microscopic, cultural, immunologic and chemical investigations, many former beliefs have been discarded, hitherto little known fungous diseases of the skin have been rediscovered, reactions to penicillin have been explained, and treatment rationalized.

Otitis externa is rarely caused by pathogenic fungi. Salvin and Lewis<sup>1</sup> studied by cultural methods one hundred cases of acute external otitis, and found bacteria alone in 84 instances, fungi alone in 8, and a mixture of bacteria and fungi in 8. None of the fungi belonged to the pathogenic dermatophytes. Of their cases, 45% were infected with *Pseudomonas aeruginosa* (*B. pyocyaneus*.) Syverton, Hess and Krafchuk<sup>2</sup> obtained similar results, with two-thirds of their cases due to *Pseudomonas*. Thus fungicides should be used sparingly, if at all, in these cases; and treatment, in many instances, should be directed against the *Pseudomonas* organism. Bearing in mind the sensitization index of Streptomycin ointment, this drug is very effective against this bacterium.<sup>3</sup>

Fowle and Georg<sup>4</sup> reported that when pustular and furuncular lesions are observed in patients coming in contact with cattle, dermatophytosis must be considered. Their report was based on 23 cases of suppurative ringworm from cattle. These chronic pyoderms have long gone unrecognized, because even when mycologic studies were done on the usual Sabouraud's media, no growth resulted. The addition of a little thiamine will allow this animal fungus to grow. It is important to recognize this disease, for although it is recalcitrant to local treatment, it responds to internal sodium iodide.

In order to explain skin eruptions resulting from penicillin, a brief review of basic experimental work is deemed necessary.

It was in 1911, that Jadassohn<sup>5</sup> introduced the concept of dermatophytid, and in 1926, Williams<sup>6</sup> elaborated on this and introduced convincing evidence that a focus of ringworm on the feet or elsewhere could be followed by a vesicular eruption of the hands. The eruption on the hands is free from viable fungus. The dermatitis is due to an allergic reaction produced by

the interaction of the sensitized skin and the products of the fungi carried by the circulation to the hands from the dermatophytic focus. Epstein<sup>7</sup> demonstrated local immunologic and allergic changes at the site of the disease.

Jadassohn<sup>8</sup> by means of the Schultz-Dale reaction found an antigen in common to all the dermatophytes. By similar experiments, Cormia and Lewis<sup>9</sup> found that this antigen was also present in penicillin. Peck and Hewitt,<sup>10</sup> however, showed that the dermatophytes elaborated a substance identical with penicillin in the process of their metabolism.

Finally, Jillson and Huppert<sup>11</sup> stressed the importance of time in the production of the immediate wheal reaction to the fungous extract, trichophytin.

Keefer<sup>12</sup> and Lamb<sup>13</sup> described the occurrence of erythematous vesicular eruptions of the groin and feet within 24 hours after the injection of penicillin. These cases had a past history of fungous disease in these locations, and when scrapings were done, they were positive for fungi. Thus, due to previous sensitization from dermatophytosis, penicillin was able to produce an eruption within 24 hours in areas with past or present ringworm.

Graves, Carpenter and Unangst<sup>14</sup> presented two cases of vesicular eruptions of the hands, following within 24 hours the administration of penicillin. Both patients had a past history of dermatophytid and a positive trichophytin test.

Finally, the common urticarial lesions usually occur after several days of treatment with penicillin. This demonstrates the importance of the time element in the production of this type of eruption.

In all cases of dermatitis from penicillin, it is important to inquire into a history of fungous infection. If active dermatophytosis is found, it should be treated, as a focus of infection might prolong the penicillin eruption.

Rothman<sup>15</sup> collected a huge quantity of adult hair and of children's hair, and extracted from the hairs various lipid substances. He isolated numerous odd-numbered fatty acids which were found to be fungicidal in extremely low concentration against *M. Audouini*, the causative agent of the human type of ringworm of the scalp. Adult hair contains ten times more of these fatty acids than children's hair. He postulated that there was an increase in the amount of these fatty acids secreted by the sebaceous glands at puberty, and that this accounted for the spontaneous cure of the human type of ringworm of the scalp at puberty. These odd-numbered fatty acids

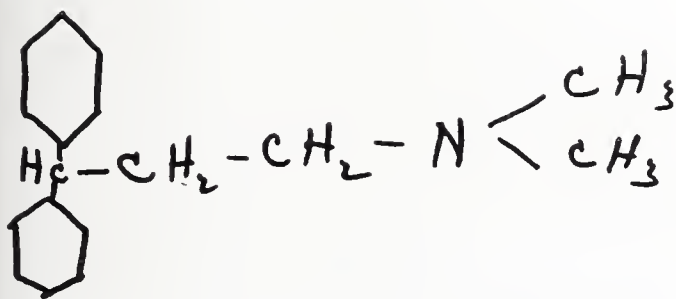
*Continued on page 124*

## CLINICAL EVALUATION OF TRIMETON

H. I. GOLDMAN, M. D., F. A. C. A., F. A. C. P. (Assc.),\* Denver, Colorado

Since the advent of Benadryl there have been numerous so-called antihistaminic drugs introduced for the symptomatic treatment of the allergic diseases. There have been varying claims, all supported by statistical studies, as to the effectiveness and the minimum of undesirable side-effects for each of them. Trimeton\*\* is one of the latest of the antihistaminic series to be marketed.

Trimeton has the chemical name of 1-phenyl-1- (2 pyridyl)-3- dimethylaminopropane. The structural formula is:



Its structural formula is related to those of Benadryl and Pyribenzamine. The side reactions of all of these three compounds are thought to be similar, but a lesser degree of toxicity is claimed for Trimeton. The author concurs with Brown<sup>1</sup> in his tenet that it is difficult to evaluate a new antihistaminic clinically, since no two patients are alike, in that none suffer from exactly identical conditions under similar circumstances; that one can evaluate only what can be expected from a new medication.

The pharmacology and the toxicity of the drug for animals has been adequately described by Lee<sup>2</sup> and Friedlander.<sup>3</sup> Brown and his group<sup>1</sup> treated 227 patients with the drug and reported an overall picture of 61% completely symptom free, 22% moderately comfortable. Wittich<sup>4</sup> reported on 125 patients given this drug and reported that 90% of those that suffered from pollenosis in his group obtained temporary symptomatic relief classified as good to fair.

The author wishes to report on a series of eighty cases, both clinic and private, in which the drug was exhibited for the symptomatic relief of allergic syndromes.

There were forty-one cases of hay-fever or pollenosis. Of these four were complicated by bronchial asthma. Of these four, three had no relief at all and one could be classed as good. Of the total group of

pollenosis cases thirty-four or 82.9% had complete temporary symptomatic relief; one or 2.4% had moderate relief; the remainder are classified as poor.

Two cases were diagnosed as a Meniere like syndrome on an allergic basis. Both cases did not respond to the drug.

There were nine cases of urticaria due to various allergens. Eight of these or 88.8% had complete symptomatic relief; one had a poor result. This poor result was in a patient with a long standing urticaria, resistant to all of the other antihistaminics and with a large psychosomatic factor.

Eleven cases were diagnosed as perennial vasomotor rhinitis, thought to be on an allergic basis. Eight of these or 72.7% had good temporary symptomatic relief; one or 9% had fair relief; two cases, which were complicated by bronchial asthma, had no relief from the drug.

There were four cases of perennial vernal conjunctivitis. Two cases obtained good temporary symptomatic relief; two cases were totally unrelieved.

There was one case of uncomplicated chronic bronchial asthma. This case had a good result, which the author thinks was due to the soporific side reaction which this patient experienced. This same patient had no relief at all during an acute exacerbation of her asthma.

Three cases were diagnosed as allergic bronchitis. Two or 66.6% had a good result; one had a poor result.

There was one case of allergic enteritis which had good temporary symptomatic relief from the drug. However, the suspected offending food was also eliminated from the diet.

Two cases were diagnosed as angioneurotic edema. Both cases had good symptomatic relief from administration of the drug.

There was one case of an allergic reaction to an insect bite. This case had a fair result as far as the itching was concerned, although the initial lesion went on to suppuration.

There was one case of severe itching sensation due to an eruption of chickenpox. The drug afforded good relief from the itching after the usual phenolic lotions were tried.

The results from the administration of Trimeton have been classed as good when there was complete temporary symptomatic relief; fair when there was at least 50% relief; poor when no improvement in the

\* Assistant in Medicine, University of Colorado Medical School.

\*\* Trimeton used in this study was furnished by the Schering Corporation of Bloomfield, N. J.



## CLINICO-PATHOLOGICAL EXERCISE

## Medical Case presented at the Eastern Maine General Hospital

DR. GEORGE ROBERTSON presiding

Edited by JOSEPH E. PORTER, M. D.

This sixty-three-year-old man was admitted to the Eastern Maine General Hospital because of pain in the right hip and thigh, and limitation of motion of the right hip due to muscle spasm. The patient was said to have fallen approximately sixteen feet to the ground when the ladder on which he was working spread apart. He was said to have landed on both feet and to have fallen to the ground with a twisting motion, landing on the right hip. On admission to the hospital he had pain in the right hip and thigh with limitation of motion.

For twenty years prior to this accident the patient had experienced occasional chest pain and had also suffered from "indigestion." About an hour or so after meals he would experience substernal and epigastric discomfort. About two hours after meals, he would become nauseated and would vomit. The vomitus always consisted of the last food eaten and would be undigested. The volume of the vomitus was always about a cupful. There was little heart burn. He had been constipated for twenty years. There was a history of "pleurisy fever" in the left chest. He was said to have had a hemorrhoidectomy and an appendectomy years ago. He had a "heart attack" in 1946, following which he was in bed for two months. He was said to have had rheumatic fever approximately thirty years ago. This was followed by pleurisy. The patient has been taking digitalis. He has had some dyspnoea on exertion and has had substernal pain with radiation to the shoulder and arm. He has had some cough with expectoration of whitish phlegm. There has been no ankle edema.

Physical examination reveals an elderly white male lying on a stretcher in considerable discomfort. The right foot is externally rotated. Temperature 97.6 degrees F., pulse 80, blood pressure 78/60 mm. mercury. Examination of the eyes reveal equal pupils which react to light and accommodation. He has an artificial denture. The lungs are clear to auscultation and percussion. There is some voluntary rigidity of the abdomen. There is no tenderness. The liver and spleen are not palpable. There are no palpable masses. Examination of the extremities reveal no apparent injury or limitation of motion to either arm or left leg. The right leg is externally rotated and slightly shortened. There is marked spasm of the quadriceps and sartorius. The reflexes are physiologic.

*Laboratory Findings:*

Urine: (1-3-47), dark yellow, slightly cloudy, acid, 1.020, albumin negative, sugar negative, acetone negative. Microscopic examination of the sediment reveals 2-4 WBC per high power field.

Blood: Hb. 12.2 gms. (78%); RBC 4,040,000; WBC 8,500; Kahn and Hinton Tests (1-2-47) were negative. Non-Protein nitrogen (1-14-47) 44 mgm. per 100 cc. Blood Group (1-15-47) AB, Rh positive.

Stool: (1-22-47), Guaiac three plus.

*X-rays:*

Film of right femur (1-2-47) showed an intracapsular fracture of the right femur with upward impaction about one inch. Film of the lumbar spine (1-6-47) showed positional rotation and scoliosis. No definite bony injury could be made out in the AP view. The lateral view was not successful. A film of the chest (1-9-47) revealed marked enlargement of the upper mediastinal shadow with a density reaching nearly to the axillary border on the left and a thin line of calcification along the border of the density. This finding appeared consistent with a very large aneurysm of the arch of the aorta with calcification. Another chest film taken on (1-16-47) revealed the trachea displaced toward the right with quite marked calcification of the left border of the dense shadow.

*Course in Hospital:*

The patient was unable to void during the first twenty-four hours of hospitalization and had to be catheterized twice during this time. He was then placed on tidal drainage for four days. On (1-15-47) the patient was nauseated and vomited approximately six ounces of rather dark blood mixed with what appeared to be curdled milk. There was a clot of blood measuring approximately two by three inches in size. Shortly after this episode the patient's pulse rose to 132 and the blood pressure was not obtainable. Elevation of the head of the bed made the patient much more comfortable but caused him to slip toward the foot of the bed which interfered with the Buck's extension. A shoulder harness was thereupon applied to prevent him from slipping down in the bed. The patient was discharged improved on (5-18-47).

Following discharge from the hospital the patient

was able to get up and hobble around a little. However, he continued to have episodes of vomiting and was said to have developed an ischio-rectal abscess. He began to lose weight and slowly went down hill until his death nine and one-half months after his fall.

### DISCUSSION

*Dr. John E. Smith:* This man was obviously admitted to the hospital because of a fractured hip sustained in a 16-foot fall. His medical history however, goes back over a 20-year period. His chief complaints were substernal and epigastric discomfort. Although there is a history of rheumatic fever followed by pleurisy and digitalis therapy, the whole picture does not seem to fit in to that commonly seen in heart's disease. His "heart attack" in 1946 for which he was put in bed for 2 months suggests that he might have had a coronary occlusion at that time. The lack of any dramatic event following this attack and the gradual terminal failure suggests that heart disease was not responsible for his death. The X-ray films show what appears to be a large aneurism of the arch of the aorta with moderate calcification. This calcification suggests that the aneurism is of arteriosclerotic rather than luetic origin. The negative Kahn and Hinton tests lend support to this idea although a single serologic examination does not rule out the possibility of lues.

This epigastric discomfort occurring approximately 1 hour after meals and the nausea and vomiting two hours after meals suggests the possibility of a gastric ulcer. It is difficult to rule out this diagnosis without a gastrointestinal series. In a man of this age one has to think of the possibility of carcinoma of the stomach which may have arisen in a previously benign ulcer. Although some people believe that carcinoma of the stomach is a malignant lesion from the start there is pretty good evidence that carcinoma may arise in an old ulcer. The rather slow downhill course of this patient would fit into this sort of picture. Furthermore in my experience an ischiorectal abscess is not an uncommon complication of malignancy of the gastrointestinal tract. Such a lesion would explain the hematemesis and the positive guaiac test in the stools. The hemoglobin of 12.2 gms. and the red blood count of 4,040,000 are not as low as one would expect in a carcinoma of the stomach associated with hematemesis. I do not understand why the head of the patient's bed was elevated following the episode of hematemesis on the 15th of January, when the patient's pulse was 132 and the blood pressure was not obtainable. It would seem as if the patient's head should have been lowered. The history of fever and pleurisy in the left chest suggests the possibility of pulmonary infarction with an underlying phlebitis, but we have no history of phlebitis. One might explain the hematemesis on the basis of

esophageal varices secondary to cirrhosis. This does not explain his other symptoms.

*Dr. Richard C. Wadsworth:* He was more comfortable when his head was elevated.

*Dr. Robertson:* Would you like to see the X-rays?

*Dr. Forrest B. Ames:* Most of the films which we have are serial films to show the progress of the fracture. The fracture can be seen to be intracapsular with upward impaction. The first chest film was bedside film with little detail. There is a marked enlargement of the upper mediastinal shadow consistent with a large aneurism of the arch of the aorta. The most marked calcification is seen in the descending portion of the aorta. The trachea is displaced to the right. This is shown better in the film taken a week later. No oblique films could be taken because the patient was in traction. It is impossible to say what structures may have been compressed by the mediastinal mass. The lung fields appear clear.

*Dr. Wadsworth:* Can any calcification be distinguished in the liver?

*Dr. Ames:* The liver is not well shown in these films but no calcification can be made out.

*Dr. Smith:* It is my impression that the fractured femur and the aortic aneurism are incidental findings in this case and that neither one contributed to this man's death. I believe that he had a malignancy of the stomach with possible metastases that were responsible for eventual demise.

*Dr. Wilfred J. Comeau:* The findings are consistent with an arteriosclerotic aneurism which probably has not been present as long as 20 years. There is insufficient data to adequately determine the cause of his long history of epigastric discomfort. The substernal pain, and cough with expectoration, are consistent with the diagnosis of aneurism. Could the thoracic mass be a large diverticulum of the esophagus?

*Dr. Ames:* A diverticulum of the esophagus would not be calcified.

*Dr. Lloyd Brozen:* The history of vomiting a cupful of undigested food regularly after meals suggests the possibility either of a diverticulum of the esophagus or a dilatation of the esophagus.

*Dr. John J. Pearson:* The hematemesis, the guaiac-positive stool, the relief which the patient experienced with elevation of his head and the post prandial discomfort might be explained on the basis of a diaphragmatic hernia. Here again there is not as much anemia as one might expect. It is possible that the relatively high hemoglobin and red blood count and the slightly elevated N.P.N. might be explained on the basis of hemoconcentration. Under laboratory findings a blood grouping was reported. Did this patient have a transfusion?

*Dr. Wadsworth:* The patient received a trans-



fusion of 500 cc. of blood on the 15th of January following a severe hematemesis. His blood pressure before the transfusion was 80/67; the transfusion was presumably given to combat shock rather than to combat anemia.

*Dr. Robertson:* What else might produce a calcified mass in the chest?

*Dr. Wilbur B. Manter:* Since the question of calcification was raised one should probably think of the possibility of echinococcus cysts. Another possibility is a dermoid cyst of the mediastinum.

*Question:* Are not dermoid cysts of the mediastinum extremely rare?

*Dr. Manter:* No they are one of the more common tumors of the anterior mediastinum.

*Dr. Lyman O. Warren:* The possibility of Addison's Disease might be considered in view of the persistent low blood pressure, small size of the heart shadow and the gradual unexplained death. Although there was no evidence of pulmonary tuberculosis while he was in hospital he may have had tuberculosis elsewhere with involvement of the adrenal glands. Ischiorectal abscess is frequently of tuberculous origin.

*Dr. Wadsworth:* Apropos of the question of tuberculosis it is interesting to note that Dieulafoy found tuberculosis as the cause of death in 18 out of 46 cases in which aortic aneurism was found at autopsy. However, approximately 50% of aortic aneurisms terminate with rupture of the sac.

*Dr. Robertson:* It seems to me that most of these symptoms can be accounted for on the basis of an aneurism which is probably of luetic origin. The symptoms go back for approximately 20 years at which time the patient was 43 years old. An aneurism in a 43-year-old man is probably luetic in origin. Pressure by the aneurism on the trachea or bronchus could account for the cough and expectoration. Pressure on the esophagus might produce partial obstruction with vomiting of undigested food. Hematemesis and a positive guaiac could be explained on the basis of an esophagitis. I agree with Dr. Warren that the death of this man may be explained on the basis of adrenal insufficiency.

*Dr. Smith's Diagnosis:*

1. Arteriosclerotic aortic aneurism.
2. Fracture of right femur.
3. Carcinoma of the stomach.

*Dr. Wadsworth's Diagnosis:*

1. Arteriosclerotic aneurism of thoracic aorta with thrombosis of aorta.
2. Lobular pneumonia of right upper and lower lobes.
3. Lung abscess, right lower lobe.
4. Healed fracture of right femur.

5. Chronic cholecystitis with cholelithiasis.
6. Multiple hepatic calculi with liver abscess.
7. Chronic periphepatitis.
8. Periportal hepatic cirrhosis.
9. Arteriosclerotic frontal cerebral atrophy.
10. Arteriosclerotic nephrosclerosis.
11. Bilateral testicular fibrosis.

*Dr. Wadsworth:* The immediate cause of this man's death was probably the pneumonic process in the right lung. This was quite extensive in the right upper and lower lobes. There was no evidence of any active tuberculosis. The mediastinal mass was a large fusiform aortic aneurism which began about 5 cms. above the aortic ring and extended throughout the thoracic aorta and into the abdominal aorta to the level of the hilus of the right kidney. The mouths of the coronary arteries were clear. There was no widening of the aortic ring. There was some wrinkling of the aortic intima near the first portion of the aneurism but there was considerable calcification throughout its extent. Sections of the aorta revealed marked lipoid deposition in the intima with areas of calcification. The media was very thin and acellular, but there was no point of rupture. In some areas there could be distinguished a perivascular infiltration of lymphocytes and plasma cells but there was no evidence of endarteritis of the vasa vasorum nor could any miliary gummata be distinguished. A massive, extensive thrombus practically fills the lumen of the aorta from the ascending portion of the arch to the diaphragm. The caliber of the lumen during life is difficult to estimate as the autopsy was performed after the body was embalmed. An attempt to embalm the body by way of the femoral artery was unsuccessful suggesting that the aortic lumen was practically closed.

Although it probably did not contribute to the death of the patient one of the most interesting findings at the autopsy was the presence of hundreds of hepatic stones in the right lobe of the liver. The bile channels were greatly dilated and filled with stones of varying size, one of which measures 3.0 cms. in its greatest diameter. These stones were black and easily crumbled. They appeared to consist for the most part of bile pigment. Stones were also present in the hepatic duct, common duct and gall bladder. There was one large cholesterol stone in the gall bladder. The wall of the gall bladder was thickened and showed a chronic inflammatory process. One of the intrahepatic bile ducts had become infected with the production of a small abscess. Sections of the liver revealed marked thickening of the intrahepatic bile ducts and rather marked periportal connective tissue proliferation with a moderate infiltration of lymphocytes. There was a diffuse perihepatitis with a thick layer of granulation tissue separating liver cells from the fibrinous exudate on the surface of the liver.

*Continued on page 120*

## THE PRESIDENT'S PAGE

The ultimate strength of the Maine Medical Association as an organization, is based on the activities and unity of purpose of the members of the constituent county societies. At the moment we are offered two activities which present opportunity for individual effort to greatly strengthen our Association :

1. The State committee for carrying out the educational program of the American Medical Association relative to Voluntary Health Insurance is ready to start its campaign. Each member of the Maine Medical Association should be ready to carry out any assignment ; whether it be in the way of public speaking ; distribution of literature ; or patient contact. A united medical front will advance our cause and enlist the aid of lay groups, which will be necessary to carry on a successful campaign.

2. The Annual Meeting at Poland Spring will bring together, in social and professional contact, members from all over the State. The greater the attendance, the stronger will be the spirit of unity, which is so much needed in these days of medical crisis. It is hoped that we may have the largest attendance record yet to be attained.

FORREST B. AMES, M. D.,  
*President, Maine Medical Association.*



## EDITORIAL

### A "Brief" of the Program in Brief

The Program for this 95th Annual Session of the Maine Medical Association, to be held at Poland Spring, June 19, 20 and 21, has been arranged according to the wishes expressed on the majority of returns from the questionnaire sent to each member of the Association last August.

The Program in Brief follows on the next two pages, and more or less speaks for itself. I do, however, want to elaborate on it a little.

Mack Murray, Mental Telepathist, who is to be your Sunday evening entertainer, must be known to you all, but I want to quote briefly from a letter received from Michael MacDougall, The Card Detective, who entertained you just a year ago: "Mack Murray does an outstanding routine of extra-sensory perception. How he actually performs the feat of seeing through bandages applied by one of the Doctors in the audience is beyond my knowledge but I can assure you that he will astound and entertain your group for 40 to 60 minutes. This is proven by the fact that he is a repeat on every booking."

William Alan Richardson, Editor of *Medical Economics*, will be the speaker Monday evening. Mr. Richardson is now in England and will be well prepared to talk to you on "Free Medicine in Britain."

Joseph S. Lawrence, M. D., Director, Council on Medical Service, Washington Office, American Medical Association, will be the guest speaker at the annual banquet, Tuesday evening. Dr. Lawrence will speak to you relative to "current events" in medicine.

I have brought these evening programs to your attention because they all offer something that you and your family cannot afford to miss.

The morning sessions will run from 10.00 to 11.30 this year, and consist of an Orthopedic Conference on Monday, and a Medical Conference on Tuesday. Luncheon conferences of Specialty Groups will be held each day from 11.30 A. M. to 2.30 P. M.

Arthur W. Allen, M. D., Surgeon to the Massachusetts General Hospital and a past President of the American College of Surgeons, will be the speaker Monday afternoon at 2.30 P. M. Dr. Allen's subject will be, "Surgery of the Large Intestine."

The President's Address by Forrest B. Ames, M. D., of Bangor, will open the Tuesday afternoon

session at 2.00 P. M., and will be followed by the Medico-Legal Conference under the Chairmanship of George L. Pratt, M. D., of Farmington.

The Official Program, which will include names of speakers and details not appearing in the Program in Brief, will be sent to each member of the Association, and will be published in the June issue of the JOURNAL.

The House of Delegates, the legislative body of the Association, will meet on Sunday at 3.00 P. M., and Monday at 4.30 P. M. These meetings are open to all members of the Association. It is hoped that every member will make an effort to be present, and that there will be a 100% attendance of county delegates.

The Election of President-elect takes place "in the general assembly of the Association at the close of the first general afternoon (Monday) session."

Lawrence W. Rember, Executive Assistant, Public Relations, American Medical Association, will be present during the entire session, and will be prepared to answer questions pertinent to this important phase of the present day program of organized medicine.

This covers, rather briefly, some of the Highlights of the Program. I can't stress too strongly the importance of this meeting, especially at this time when so much in the future of your profession depends on the whole-hearted coöperation of County and State Organizations.

#### FOR THE LADIES

A special luncheon is being arranged for the ladies on Monday at 12.30 P. M. This is one day when you will be free for a "stag" luncheon.

At 2.30 P. M., on this same day, there will be an organization meeting of the Woman's Auxiliary to the Maine Medical Association.

On Tuesday, there will be a Tea at 4.00 P. M. This will follow the Medico-Legal Conference which has proved so popular with the ladies in the past, and precede the Annual Banquet, which they definitely will not want to miss.

They are also invited to attend all evening sessions, and to participate in the Golf Tournament, which is being arranged by Francis A. Winchenbach, M. D., of Bath.

**PROGRAM IN BRIEF**  
**Maine Medical Association**  
**Ninety-Fifth Annual Session**  
**POLAND SPRING HOUSE**  
**Poland Spring, Maine**  
**SUNDAY, MONDAY, TUESDAY**  
**JUNE 19, 20, 21, 1949**

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ARRANGED BY THE SCIENTIFIC COMMITTEE  
Martyn A. Vickers, M. D., *Chairman*  
Carl E. Richards, M. D.  
Franklin F. Ferguson, M. D.  
Frederick R. Carter, M. D., *Secretary, ex-officio*

**SUNDAY, JUNE 19, 1949**

**3.00 P. M.**

FIRST MEETING OF THE HOUSE OF DELEGATES

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**7.00 P. M.**

DINNER

Guest Speaker:

Mack Murray, Mental Telepathist

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**MONDAY, JUNE 20, 1949**

**9.30 A. M.**

GENERAL ASSEMBLY:

President, Forrest B. Ames, M. D., presiding

Announcements:

Martyn A. Vickers, M. D., Chairman, Scientific Committee

Frederick R. Carter, M. D., Secretary

**10.00-11.30 A. M.**

ORTHOPEDIC CONFERENCE

Chairman, Martyn A. Vickers, M. D., Bangor

Moderator, Allan Woodcock, M. D., Bangor

Speakers:

Joseph Shortell, M. D., Boston

Edwin F. Cave, M. D., Boston

Otto J. Hermit, M. D., Boston

Subject: "Present Day Treatment of Fractures"

Round Table discussion of Orthopedic Problems

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**11.30 A. M.-2.30 P. M.**

EYE CONFERENCE

Chairman, Howard F. Hill, M. D., Waterville

Speaker:

Paul Chandler, M. D., Boston

Subject:

"Glaucoma" (followed by discussion)

ALLERGY CONFERENCE

Chairman (to be announced)

Speaker:

George Gaillard, M. D., White Plains, N. Y.

PEDIATRIC CONFERENCE

Chairman, Albert W. Fellows, M. D., Bangor

**12.30 P. M.**

LUNCHEON

A table will be reserved for Past Presidents of the Maine Medical Association

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**2.30 P. M.**

SURGICAL CONFERENCE

Chairman, Carl E. Richards, M. D., Sanford

Moderator, William V. Cox, M. D., Lewiston

Speakers (to be announced)

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**4.30 P. M.**

ELECTION OF PRESIDENT-ELECT

**5.00 P. M.**

SECOND MEETING OF THE HOUSE OF DELEGATES

**7.00 P. M.**

DINNER

Guest Speaker:

William Allan Richardson, Rutherford, N. J., Editor—  
Medical Economics

Subject: "Free Medicine in Britain"



**TUESDAY, JUNE 21, 1949**

**10.00-11.30 A. M.**

**MEDICAL CONFERENCE**

Chairman, Franklin F. Ferguson, M. D., Portland  
Moderator, Richard S. Hawkes, M. D., Portland  
Speaker :  
    Chester Keefer, M. D., Boston  
Subject: "Antibiotics" (A formal discussion on Antibiotics followed by a question and answer period)

**11.30 A. M.-2.30 P. M.**

**EAR, NOSE AND THROAT CONFERENCE**

Chairman (to be announced)

**12.30 P. M.**

**LUNCHEON**

**2.00 P. M.**

**PRESIDENT'S ADDRESS**

Forrest B. Ames, M. D., Bangor, President

**2.30 P. M.**

**MEDICO-LEGAL CONFERENCE**

Chairman, George L. Pratt, M. D., Farmington, Secretary  
Speakers :  
    Francis W. McCabe, Chief, State of Maine Police  
    Mrs. Frances Glessner Lee  
    Subject: The Nut Shell Laboratories  
Richard Ford, M. D., successor to Allan Moritz, M. D., Legal Department, Harvard Medical School. Dr. Ford will present interesting cases and pictures.

**7.00 P. M.**

**ANNUAL DINNER**

Presentation of Fifty-Year Medals by President Forrest B. Ames  
Guest Speakers :  
    Governor Frederick G. Payne  
    Joseph S. Lawrence, M. D., Director, Washington Office, Council on Medical Service, American Medical Association  
Subject (to be announced)

**PROGRAM FOR THE LADIES**

**MONDAY, JUNE 20, 1949**

**12.30 P. M.**

**LUNCHEON**

**2.30 P. M.**

ORGANIZATION MEETING WOMAN'S AUXILIARY TO MAINE MEDICAL ASSOCIATION

**TUESDAY, JUNE 21, 1949**

**4.00 P. M.**

**TEA**

**GOLF TOURNAMENT**

Francis A. Winchenbach, M. D., will serve as Chairman of the Committee on Arrangements for the Golf Tournament. There will be prizes for members, ladies and guests.

**Convention Rates  
Poland Spring House  
Poland Spring, Maine**

The Convention Rates for the 1949 Annual Session are as follows:

- Double Room with twin beds and private bath—\$12.00 per person per day.
- Two double rooms with twin beds and connecting bath, or a double room and single room with connecting bath—\$12.00 per person per day.
- Single room with private bath—\$14.00 per day.
- Single or double room without bath — \$10.00 per person per day.

Charge for non-registered guests for meals will be as follows:

Breakfast .....	\$1.50
Luncheon .....	3.00
Dinner .....	3.00
Banquet .....	4.00

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## COUNTY SOCIETY NOTES

### 100% Paid Membership for 1949

Piscataquis County Medical Society  
Hancock County Medical Society  
Oxford County Medical Society  
Waldo County Medical Society  
Lincoln-Sagadahoc Medical Society  
Aroostook County Medical Society  
Washington County Medical Society

### Kennebec

A regular meeting of the Kennebec County Medical Association held at the Veterans' Administration, Togus, Maine, April 21, 1949, began with a roast beef dinner at 6.00 P. M. There were forty-one members and guests present.

Dr. Allan C. Hurd, Vice President of the Society, presided at the business meeting in the absence of President Small. The reading of the records of the previous meeting was postponed. Dr. Charles E. Towne of Waterville, was appointed as a delegate to the Maine Medical Association, to fill the unexpired term of Dr. Theodore E. Hardy, deceased. Dr. Hurd then turned the meeting over to the host, Dr. B. L. Allen, Chief Medical Officer at Togus.

Dr. J. Englebert Dunphy and Dr. Seymour Gray, both of Boston, speakers of the evening, were introduced by Dr. Allen. They spoke on the "Management of Acute Upper Gastro-Intestinal Hemorrhage." Dr. Dunphy discussed the surgical phase of the problem, the establishment of the diagnosis, exclusion of gastritis and varices, adjustment of blood level, importance of nursing during critical hours, and stated that age is not a decisive factor in all cases. Dr. Gray talked on the medical management. He stressed the importance of warm milk during night hours, and said that moving the patient for X-ray, is ill advised, as clot can mask ulcer crater. They both brought out the idea that good medical management is of prime importance and that surgery can be elective. A long active discussion followed one of the best lectures we have had on stomach ulcers.

A. H. MORRELL, M. D.,  
Secretary.

### Somerset

A meeting of the Somerset County Medical Society was held at the Lancy House, Pittsfield, Maine, April 19, 1949, at 4.00 P. M.

Heindrich Brugsch, M. D., of the Pratt Diagnostic Hospital, Boston, Massachusetts, spoke to the group on, "The Medical Aspects of Bone Disease."

A short business meeting was held, at which it was voted to pay the delegate to the Maine Medical Association \$75.00 to help pay his expenses, and a committee consisting of Dr. G. E. Sullivan, Bingham, and Dr. L. F. Norris, Madison, was appointed to draw up a resolution against compulsory health insurance; copies to be sent to the public officials in Washington.

Following the meeting, a steak dinner was enjoyed.

H. C. AMREIN, M. D.,  
Secretary.

### Washington

A regular meeting of the Washington County Medical Society was held April 14, 1949, at the Hotel East in Eastport, with twelve members and one guest present.

*Continued on page 122*



*Clinical Evaluation of Trimeton—Continued from page 111*

symptoms complained of were noted. The word temporary was inserted advisedly, since withdrawal of the drug without adequate allergic control resulted in a prompt return of the symptoms in most of the cases.

The overall picture of the results obtained in our series shows:

61 cases or 76.2%—good.

2 cases or 2.5%—fair.

17 cases or 21.3%—poor.

There were four cases or 5%, who complained of side effects. Three of these complained of sleepiness, which was not severe enough to discontinue the medication. One case, curiously, complained of insomnia and discontinued the drug, since it interfered with his work.

## SUMMARY

Eighty cases with allergic disorders to whom Trimeton (prophenpyramidine) was given for symptomatic

relief are reported. The ages of the patients varied from five years to the late sixties. The dosage used varied from 12.5 mg. after meals to 25 mg. every four hours. This series is too small for the author to come to any definite conclusions except that the drug is worthy of a trial in stubborn allergic disorders. It was relatively free of side effects in our experience. Where bronchial asthma complicated the symptom picture, the drug proved to be of no value. No comparable series was run to evaluate the superiority or inferiority of this compound as compared to any of the other so-called antihistaminic drugs.

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4. Wittich, F. W.: Trimeton in the treatment of allergic diseases. *Ann. Allergy*, 6:497, 1948.

*Clinico-Pathological Exercise—Continued from page 114*

Some of you may have seen the article on Hepatic Calculi by Bussler and Peters in the October number of the *American Journal of Medical Sciences*.<sup>1</sup>

Sections of the testes revealed considerable fibrosis between the tubules and a spermatocele in the right testis. There was no evidence of gumma formation nor was there any evidence of any active inflammatory process.

The brain weighed 1507 gms. but showed moderate atrophy of the superior surface of both frontal lobes. The orbital surfaces failed to show any atrophy. Sections of the frontal lobes revealed slight fibrous thickening of the leptomeninges without evidence of any inflammatory reaction. The gyri were small. There was a marked dropping out of nerve cells in the cortex, but no evidence of gliosis or of any perivascular infiltration. There was no evidence of any ependymal granulation.

Although we have in this case a thoracic aortic aneurysm and moderate fibrosis of the testes, there is insufficient evidence to make a diagnosis of lues. The Kahn and Hinton tests were negative. The first five centimeters of the aorta were essentially free of disease. The aneurism was calcified in the transverse and descending portions of the arch. The aneurism

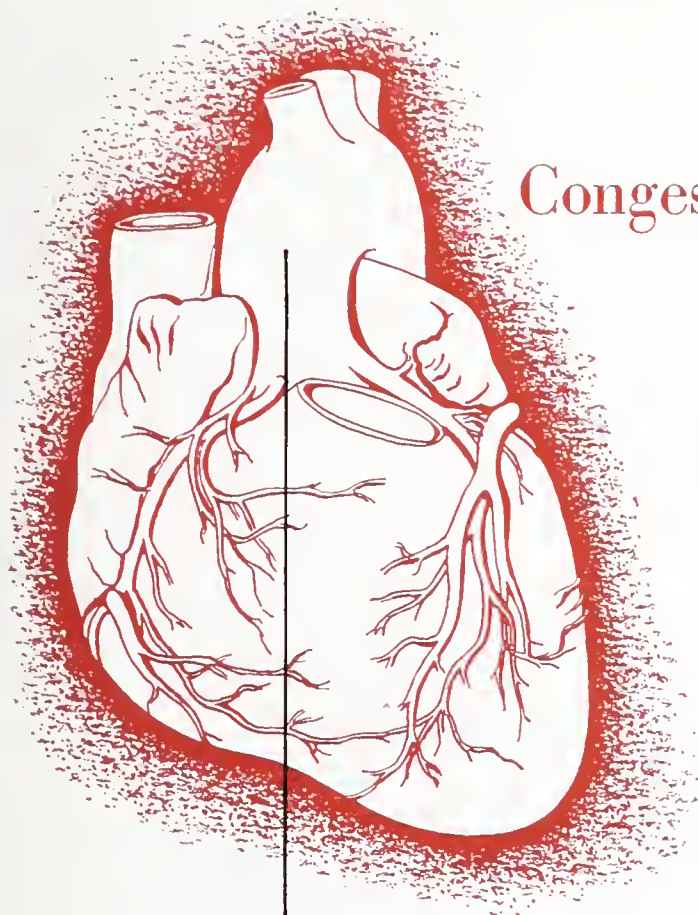
extended into the addominal portion of the aorta. There were marked atheromatous changes histologically. There was no evidence of any chronic inflammatory reaction either in the testes or in the brain.

The aneurysm compressed the left main bronchus and apparently compressed the esophagus in life as there was considerable hypertrophy of the muscularis of the lower esophagus. No ulceration of the esophagus or stomach could be demonstrated. It is quite possible that the aneurysm might have caused sufficient pressure on the esophagus to interfere with the venous return from this organ and thus be responsible for the bleeding from the upper G. I. tract. No esophageal varices could be demonstrated. It is not difficult to see why the patient was more comfortable with his head elevated than while lying flat. One can also understand why he had less regurgitation when the head of his bed was elevated.

The adrenal glands were essentially normal both grossly and microscopically.

## REFERENCE

1. Hepatic Calculi: Bassler, A., and Peters, A. G., *Am. J. Med. Sci.*, 214:422-430 (Oct.), 1947.



## Congestive Heart Failure...

"The most striking effects were seen in cases of hypertensive heart failure. . . . There is a rapid fall in the raised right auricular pressure with a conspicuous increase in the output of the heart."<sup>1</sup>

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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

1. Howarth, S.; McMichael, J., and Sharpey-Schafer, E. P.: The Circulatory Action of Theophylline Ethylene Diamine, Clin. Sc. 6:125 (July 17) 1947.



*County Society Notes—Continued from page 119*

An excellent dinner was served at 6.30 P. M., following which a brief business meeting was held with Dr. Willard H. Bunker, President, presiding as chairman. The subject of the Washington County number of THE JOURNAL OF THE MAINE MEDICAL ASSOCIATION came up for discussion. It was voted to send all papers to Dr. S. R. Webber of Calais who would transmit them en masse to the JOURNAL. It was decided to leave the choosing of the papers for publication up to the editors of the JOURNAL. The question of fee schedules was tabled until the next meeting.

Dr. R. S. Buker of Eastport, then showed the film, "Come-back," which illustrated very graphically the work that is being done by the Division of Vocational Rehabilitation in restoring the disabled to useful life.

Dr. Lawrence Cutler of Bangor, Maine, guest speaker, spoke on the treatment of Hyperthyroidism with Propylthiouracil. Dr. Cutler covered the various eras of treatment used for Hyperthyroidism ending with a detailed description of the use of Propylthiouracil and illustrating his talk with lantern slides of case reports. He showed that if the initial daily dose of Propylthiouracil was over 200 mg. that the patient responded much better than those with a lower daily dose. He also brought out the use of Radioactive Iodine in the treatment of Hyperthyroidism which is now used only in the large centers. He thought that Radioactive Iodine would eventually replace Propylthiouracil. This excellent talk was followed by a period of questioning and discussion.

It was voted to hold the next meeting in Calais on Wednesday, June 15th.

KARL V. LARSON, M. D.,  
Secretary.

**Deceased****Androscoggin**

Oscar E. Hanscom, M. D., Greene  
Died: March 22, 1949

**Cumberland**

Dexter J. Clough, M. D., Portland  
Died: March 23, 1949

**Washington**

Ernest A. White, M. D., Columbia Falls  
Died: April 30, 1949

**NEWS AND NOTES**

**Dr. Brooks Appointed Associate Director, American Academy of Pediatrics' Committee for Improvement of Child Health**

Appointment of Dr. Glidden L. Brooks as Associate Director of the American Academy of Pediatrics' Committee for the Improvement of Child Health, whose offices are in Philadelphia, has been announced by Dr. Warren R. Sisson, President of the Academy. Dr. Brooks has been Executive Director and Chief of Pediatrics of the Central Maine General Hospital, Lewiston, Maine, for several years, and is a member of the Androscoggin County Medical Society.

**Harold A. Pooler, M. D., Appointed Superintendent Bangor State Hospital**

Harold A. Pooler, M. D., former acting director of the Utica, New York, State Hospital, has assumed his duties as Superintendent of the Bangor State Hospital. A native of Skowhegan, Dr. Pooler has been associated with large hospitals for the past twenty years. He was graduated from the University of Vermont in 1921 and received his Medical Degree in 1927.

**Allan I. Saunders, M. D., Named to Augusta State Hospital Staff**

Allan I. Saunders, M. D., graduate of Tufts College Medical School, has been appointed Assistant Physician on the Augusta State Hospital staff, by Francis H. Sleeper, M. D., Superintendent.

Dr. Saunders was born in Boston, Massachusetts, is a

graduate of the Boston Public Latin School, Tufts College, and Tufts Medical School, cum laude in 1942. He interned at Grace Hospital in New Haven, Connecticut, from 1942 to 1943, and was Resident in Medicine at the Grace-New Haven Community Hospital in New Haven, Connecticut, from 1943 to 1947.

**BOOK REVIEW**

**Modern Clinical Psychiatry  
(3rd Edition)**

By Arthur P. Noyes, M. D., Supt., Norristown State Hospital, Norristown, Pa.

W. B. Saunders Co., Philadelphia, 1948. 525 pages. Price, \$6.00.

This edition of Modern Clinical Psychiatry is a comprehensive and orderly presentation, and follows the classification of mental disorders as adopted by the American Psychiatric Association in 1934. With increasing emphasis being placed on the importance of Psychiatry in medical schools, a good text on the subject is always welcome. The first two chapters deal with development and purpose of mind with psychic energy and with dynamics of behavior. They are excellent.

Chapter III describes mental mechanisms and emotions in simple language and with obvious respect for the concepts of Sigmund Freud. Elsewhere tribute is also given Adolph Meyer and his work in the field of Psycho-Biology. Then there follows twenty-one chapters which describe the disorders mentioned in the APA classifications. There is a good section on Epilepsy, Evolutional Melancholia, Hysteria, and Psychopathic Personality. This is a very valuable book.

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*Neuropsychiatric and Medical Aspects of Head Injuries—Continued from page 104*

either be compensated for, or, if it reaches the stage where the individual shows signs of decompensation, with embarrassment of the vital functions, usually a lumbar puncture is done relieving the pressure, not too rapidly, and not more than half of the initial pressure in relationship to the basic 100 or 150 millimeters of water, and then, Dr. Maltby or some other neurosurgeon is called upon to carry on. I do not believe that any one short of a neurosurgeon should have the temerity to invade the cranial cavity.

I have already spoken of decompensation which you relieve as much as you can, and then get it into better hands. At least, I do.

If the individual goes along perfectly all right and compensates well, and you see no great signs of residuals, and I might say that three out of four patients do that, I believe that ten days' or two weeks' bed rest, getting them up gradually, warning them properly that they may have certain difficulties and preparing them that they are not going to have permanent residuals; because when anyone gets his head hit he is perfectly sure that forever after when anything happens to him it is due to the head trauma that he had received previously.

In an uncomplicated concussion, of course, you are apt to have headaches for awhile, especially if doing any strenuous exercise, working hard or studying hard or lifting or something like that. So that if you prepare them for the fact that they are going to have headaches for a while, but not forever, that is valuable, I believe, in their therapy.

The same thing is true, if they have to go far away and out of your hands; they can be told that in spite of the fact that they have a fractured skull and have had hemorrhage inside their head, if this is properly taken care of, they don't need to think that for the rest of their lives they will be cripples.

That is particularly true, I believe, in cases in which insurance and compensation are involved.

I don't want to discuss other fractures, because I don't know anything about them, and I think every injury should be given some idea of the reasonable duration of their inability to do their ordinary day's work. If you don't give them some idea, they are very apt to go on expecting the insurance company to take care of them for the rest of their lives!

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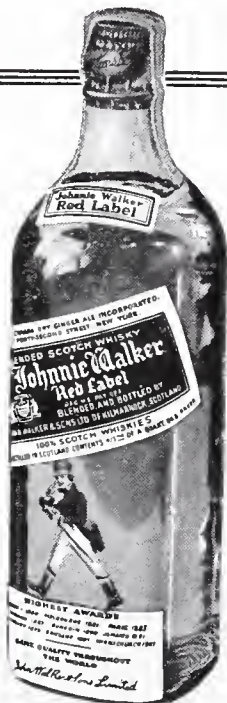
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### *Dermatophytosis—Continued from page 110*

are of the same order as those introduced by Peck<sup>16</sup> for the treatment of ringworm (proprietary names being Timofax, Desenex, Sopronol).

Since there are no sebaceous glands on the soles and insteps, the fatty acid preparations are effective here, but are less so where sebaceous glands are found, as the fungus is already growing in the presence of these fatty acids. Murphy and Rothman<sup>17</sup> demonstrated that fungi can build up a resistance to the odd-numbered fatty acids. Therefore, sulfur and salicylic acid ointment or tar may be found more effective in the treatment of ringworm of the body.

### SUMMARY

1. The rarity of otomycosis has been stressed, and it has been suggested that in otitis externa, treatment in many cases should be directed against the *Pseudomonas* organism.
2. Deep suppurative lesions appearing in patients in contact with cattle should suggest a fungous etiology. If found, the most effective treatment is by internal iodides.
3. Many of the cutaneous penicillin reactions are based on the presence of sensitization of the skin from dermatophytosis.
4. The odd-numbered fatty acids derived from the sebaceous glands produce spontaneous cure at puberty of the human type of ringworm of the scalp. They are useful in the treatment of dermatophytosis in locations where there are no sebaceous glands.

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# The Journal of the Maine Medical Association

Volume Forty

Portland, Maine, June, 1949

No. 6

## CANCER OF THE LARYNX

### Report of a Case

P. E. PROVOST, M. D.,\* Veterans Administration Center, Togus, Maine

A. R., age 29 years, was admitted to this hospital on November 30, 1948, with a diagnosis of papilloma of the right vocal cord. His chief complaint was hoarseness which was first noticed 15 months previous to admission. He was treated for a cold in the throat but during the course of several weeks the cold disappeared but the hoarseness persisted. He was seen by LMD's who told him that he had laryngitis but that rest of the voice would improve his condition. At no time was his larynx examined. He had no dysphagia, difficulty in breathing or pain. During the course of his illness the hoarseness gradually became worse until he could talk in a faint whisper only. A few weeks prior to admission he consulted a laryngologist who told him that he might have a cancer in his throat.

The patient's occupation is that of a glazer. His habits as to the ingestion of alcohol and smoking tobacco are temperate. He has smoked a pipe for about four years. There is no immediate family history of CA.

Physical examination on admission revealed patient to be coöperative and answered questions in a faint whisper. Examination of the larynx showed a yellowish thickening of the right vocal cord from and including the arytenoid down the anterior commissure and crossing over the left cord to the mid portion. There was almost complete immobility of both cords.

There were no palpable nodes in the neck. The remainder of the examination was essentially normal. X-ray of heart and lungs was normal. Blood and urine examinations were within normal limits. A biopsy was taken on December 7, 1948, which revealed a squamous cell carcinoma, Grade II. He was then sent home for the Christmas holidays.

Upon his return to the hospital he was given pre-operative dental care and on January 4, 1949, a total laryngectomy was performed from which patient made an uneventful convalescence. He was sent on leave of absence for a week at the end of which time he returned in good spirits. An attempt was made at teaching him esophageal speech with rather good results. He was discharged from the hospital and it is hoped that he will have adequate schooling in esophageal speech.

### COMMENT

Cancer of the larynx spares no age group. Chronic hoarseness should lead one to suspect malignant disease of that organ. A thorough examination of the larynx by either indirect or direct laryngoscopy is indicated in all cases. At that time a careful biopsy should be taken of any suspicious looking tissue. If one biopsy is inconclusive, a second should be taken. Failure to do so is considered negligence.

Cancer of the larynx is curable in its early stages; therefore, early recognition is paramount.

\* E. E. N. T. Service, Togus, Maine.



SERVICE FOR THE VETERAN AT THE NEUROPSYCHIATRIC HOSPITAL,  
TOGUS, MAINE\*

ISRAEL ZELTZERMAN, M. D.\*\*

In order to clarify the picture with regard to neuropsychiatric service available at the Veterans Administration Center, Togus, Maine, a review of the situation is being presented. There appears to be considerable vagueness and misapprehension with regard to the following questions:

- A. What, actually, is the size of the neuropsychiatric problem as pertains to veterans?
- B. Who is eligible for treatment?
- C. How to secure admission for a veteran?
- D. What facilities are available for neuropsychiatric care and treatment?
- E. What happens to the hospitalized neuropsychiatric veteran—"Does he ever get out of Togus?"

A. *The Size of the Neuropsychiatric Problems as Pertains to Veterans.*

The actual situation in the field of neuropsychiatry as pertains to the veteran has been the subject of much discussion and conjecture. Without some basic data available there is considerable resultant obscurity and misinterpretation. The number of veterans having psychiatric and neurological disabilities can only be estimated. However, the number of veterans hospitalized since shortly after World War I is a matter of record. What has happened in the Veterans hospital system since 1940 is also a matter of record. Future estimates are based on experiences with World War I and other war veterans.

The number of beds assigned for the care of patients with psychiatric and neurological disabilities actually exceeds the number of all other types put together.

Figure No. 1  
*Average Capacities of VA Hospitals*

Fiscal Year	NP Beds	*Unavailable NP Hosp. Beds	Total Beds
1947	56,635	2,277	104,260
1948	59,038	** 3,433	111,175
1949	60,264	—	117,517

\* Unavailable chiefly because of personnel shortages.  
\*\* Average for 3 months only.

Approximately 54% of all beds are designated for neuropsychiatric disabilities. Actually, this does not

\* Opinions expressed are those of the writer, and do not necessarily reflect the opinions or policies of the Veterans Administration.

\*\* Chief of Professional Services, Neuropsychiatric Hospital, Togus, Maine.

mean that 54% of all admissions to hospitals are for neuropsychiatric disabilities, but this percentage of beds is occupied by neuropsychiatric patients inasmuch as they cannot be treated and discharged at the same rate as general medical and surgical patients. At this Center, with a total bed capacity of 869, 564 beds are designated for neuropsychiatric patients. During the calendar year 1948, 12.9% of all admissions were to the Neuropsychiatric Hospital. This, of course, does not show the number of veterans with mild or severe neuropsychiatric disabilities who were treated by other professional and non-professional sources in the state.

Based on past records, it is estimated that the peak of admission and hospitalization for neuropsychiatric disabilities will not be reached until 1965. Should the same ratios of hospitalization continue, it is estimated that by 1965 there will be necessary 134,000 neuropsychiatric beds — this providing that veterans stay in hospitals as long as they did in the past. With facilities and resources for treatment, length of Neuropsychiatric Hospital stay will no doubt be curtailed even more in the future than it already has been. All efforts are being made by the Veterans Administration for the prevention of hospitalization in Neuropsychiatric Hospitals by the establishment of mental hygiene clinics.

B. *Who Is Eligible for Treatment?*

The only condition for which the Federal Statute grants an absolute right to hospital and medical care is the existence of a disease or disability which has been rated by the Veterans Administration as service incurred or aggravated and for which such care is needed. Otherwise, necessary hospital care for veterans of any war is conditioned upon either the availability of an appropriate hospital bed or the financial inability of the veteran to supply himself with necessary hospital care, or upon both such conditions. The order of preference of admission, insofar as beds are available, is as follows:

1. Medical emergency, regardless of whether or not condition is service connected.
2. War Veterans — for disease or injury incurred in service in line of duty.
3. Peacetime Veterans — for disease or injury incurred in service, in line of duty, or for which compensation is being received.
4. Service-connected Veterans requiring hospitalization for non-service connected conditions.

5. Veterans not in receipt of compensation for service connected or aggravated disabilities and who are unable to defray expenses.

The determination as to whether a patient is medically eligible for treatment is the function of a physician—either the Veteran's private physician or the physician at the Veterans Administration Center, Togus, Maine. The latter, on examination of the medical evidence on the P-10 form, or the veteran himself, makes final determination. Legal eligibility is determined by the Eligibility Unit of the Registrar Division of the Center on the basis of Veterans Administration regulations and congressional laws governing these benefits. *For hospitalization purposes* a "war veteran" is one who has had at least one day of war service (service between December 7, 1941, and noon of December 31, 1946) and who has been discharged from service *under other than dishonorable conditions*. In some cases of "blue" (or Without Honor) discharge, adjudicative authorities may under certain conditions legally determine that even though a man does not possess a "white" (or Honorable) discharge, he may receive hospitalization benefits. A "peacetime veteran" is eligible who has been given service connection for any illness during his peacetime service.

The question of what constitutes a medical emergency in the case of a neuropsychiatric illness is a determination to be made by the referring physician. Advice on this determination can be obtained at any time by calling the Neuropsychiatric Hospital. There have been cases in which referring physicians have placed an erroneous "emergency tag" on patients in order to secure quick admission. The "emergency tag" has often been used as a device to relieve the referring doctor or community of their own responsibility.

#### C. *How to Secure Admission for a Veteran to the NP Hospital.*

Admissions are of necessity regulated by the availability of beds. In the case of the veteran with a neuropsychiatric illness not of an emergency nature, it is necessary for the referring physician to fill out a P-10 application and forward it to the Registrar, Veterans Administration Center, Togus, Maine. (P-10 forms may be obtained from the Registrar, any service officer or Contact office.) The P-10 application is reviewed for both medical and legal eligibility and, in accordance with order of preference already referred to, hospitalization is arranged by the Registrar's office.

In the case of an emergency, it is advisable that the referring physician call the Registrar's office (Pa-

tients' Control Section) by telephone (Extension 239). In the absence of the Registrar, the Officer of the Day will make necessary arrangements.

In all cases where a veteran is referred for hospitalization, it is necessary for the referring physician to complete (insofar as possible) the P-10 application. It is desirable that as complete medical information as possible should be furnished. Committed patients frequently arrive at the hospital with no information at all relative to the patient's illness. In all instances, except when a veteran is legally committed, it is necessary that the patient sign a statement that he is willing to enter a "locked ward" voluntarily. Unless the Veteran is committed, or constitutes a psychiatric emergency, he can not be placed on a locked ward involuntarily. Because of the physical structure all the wards to which a new admission might go are classed as "locked" wards. With regard to commitment: "The purpose of commitment proceedings is to provide for the lawful restraint of a mentally ill person. The provisions of the Statutes of Maine relating to the commitment of an insane person apply equally to veterans and non-veterans except that only those eligible under Veterans Administration laws and regulations for hospitalization may be committed to a Veterans Administration hospital. Veterans who are insane, regardless of whether such condition was or was not induced by service and who are otherwise eligible for hospitalization may be committed to a Veterans Administration hospital."

When it is necessary the Veterans Administration may furnish a car to transport the (insane) person, and attendant to care for him, from the place of commitment to this hospital. Such transportation, if at Government expense, must be authorized in advance (telephonic authorization is sufficient). The attendant(s) must secure, in all cases, the certificate of commitment and a certified copy of the two physicians' certificate, prior to accepting custody of the patient. In the case of an emergency commitment it is necessary that a certified copy of the complaint and a certified copy of the two physicians' certificate be obtained.

#### D. *Facilities Available for Treatment.*

Only by the utilization of all modalities of treatment available is it at all possible to treat patients, return them to their communities and have beds available for new admissions. All patients enter into the program of treatment designated as the Total Push Program.

With a limited staff of physicians, the ancillary services are noted above, have a very important rôle in the treatment and rehabilitation of neuropsychiatric patients. Psychotherapy is administered on an individual basis within the means of the limited staff.

*Continued on page 132*



## SURGERY IN THE TREATMENT OF GASTRO-DUODENAL ULCER

JOHN A. NELSON, M. D.\*

With the enormously expanded interest in peptic ulcer physiology and surgery that has followed the technical standardization and lower mortality of gastrectomy, and the reintroduction of vagus resection as a means of therapy, it has become necessary for every clinic and gastric surgeon to reevaluate his concepts of ulcer surgery and to adopt, at least tentatively, a policy for the treatment of these problems.

This paper presents in general terms the present attitude of the Surgical Service, V. A. Hospital, Togus, toward the surgical management of gastro-duodenal ulcer. No review of the literature will be attempted, although a short general bibliography is appended. Reference will be made in the text only to recent articles that have established the fundamentals upon which our present concepts are based. The attitude presented here would certainly be considered conservative by many of the larger clinics, and it is, moreover, a "middle of the road" policy, utilizing both the proved effectiveness of modern gastrectomy and the promising therapeutic worth of vagotomy combined with gastric drainage. It is the general opinion that probably ten years must pass before the true place of vagus resection in the treatment of peptic ulcer is established. During that ten years many ulcer patients will have to be treated by surgery.

### GASTRIC ULCER

Results in the treatment of gastric carcinoma present one of the most depressing situations in the entire field of surgery. Because of this and because of the extreme difficulty in differentiating between benign and malignant gastric lesions, there has developed a very different surgical attitude toward ulcerations proximal and distal to the pylorus. The treatment of duodenal ulcer is essentially a medical problem, with surgery being reserved for the complications of the disease. On the other hand, it has become apparent that the therapy of all lesions proximal to the pylorus should be basically surgical, each gastric ulcer being considered potentially carcinomatous until careful study or operative removal proves it otherwise. Eighty per cent or more of duodenal ulcers are generally pictured as amenable to medical treatment, whereas 50 per cent or more of gastric ulcers should probably be treated surgically, gastric resection being the operation of choice.

Allen and Welch<sup>1</sup> propose a set of criteria which is rational and which, with individual exceptions, has been accepted as the basis of our present attitude

at Togus. These authors recommend immediate surgery in gastric ulceration under any of the following conditions: 1) If the ulcer is of short duration and the patient over 50; 2) If it is over 2.5 cm. in diameter; 3) If there is no free HCL in the stomach; 4) If the ulcer is in the greater curvature or the prepyloric region; 5) If it is chronic or recurrent and on the lesser curvature. Hospital observation and strict medical treatment for one month is advised if the lesion is acute and in a young patient, or if under 2.5 cm. in diameter and on the lesser curvature or anterior or posterior wall. In this group, surgery is advised if healing is not complete in one month. If healing is complete the patient should be studied at the end of another month and followed carefully.

These criteria are accepted on this service in lesions of the lower part of the stomach. In high ulcerative lesions, where resection would be much more hazardous, a much longer period of observation and careful study is indicated. Every attempt should be made to establish a definite diagnosis, including serial X-rays, gastroscopy, study of gastric washings by Papanicolaou's technic and even biopsy. It is our feeling that the mortality of very radical or total gastrectomy is probably greater than the chance of missing carcinoma in a thoroughly studied patient.

If surgery is indicated because of severe intractable symptoms in a high benign ulcer, we would consider segmental resection of the ulcer, the so-called palliative gastrectomy<sup>2</sup> leaving the ulcer in situ, or gastroenterostomy with vagotomy, before subjecting the patient to the high mortality and post-operative sequelae of a total gastrectomy.

In instances of proved or very probable carcinoma, however, we would not hesitate to remove the entire stomach, preferably through a transthoracic or abdomino-thoracic approach.

### DUODENAL ULCER

The surgery of duodenal ulcer is the surgery of its complications. Intractability, although a more indefinable entity than perforation, obstruction, and hemorrhage, can be considered for all practical purposes as another form of complication. The indications for surgery in duodenal ulcer will be discussed briefly and then the operative procedures which may be employed.

### INDICATIONS FOR SURGERY

#### 1. Perforation

There is little disagreement among surgeons concerning the management of acute perforations seen

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within the first 12 hours. These are dealt with by simple closure of the ulcer, either by mattress suture or the free omental graft technic of Graham,<sup>3</sup> followed by aspiration of the peritoneal cavity and closure of the wound without drainage. As Graham<sup>3</sup> and others<sup>1</sup> have pointed out, the serious clinical condition of these patients is not the result of bacterial peritonitis, but of nutritional and biochemical imbalance associated with shock. Adequate preoperative correction of these disturbances is demanded. Post-operatively, gastric suction, fluid and electrolyte replacement, and large doses of penicillin and possibly streptomycin, carry the patient through the difficult period when peritonitis may be a danger.

Patients seen late in the disease (after 12 hours) who are apparently reacting well and localizing the process are not subjected to surgery, but to a strict Ochsner regime, gastric suction, fluid replacement, and massive doses of the antibiotics.

Patients seen late in the disease who are not responding well have a poor prognosis under any form of treatment. The poor response of these individuals can usually be attributed to continued peritoneal soilage from an open perforation. Closure of the ulcer, after adequate preoperative preparation, would seem to offer these patients their best chance of getting well.<sup>4</sup>

### 2. Obstruction

True organic obstruction because of scar formation in the duodenum is one of the most important and common causes for surgical intervention in duodenal ulcer. The degree and permanency of the obstruction must, of course, be differentiated by X-ray and retention studies from the spontaneously subsiding reflex and "edema" obstruction accompanying an acute or subacute ulcerative process. Great care must be used in preparing the obstructed patient for surgery, particular attention being paid to his nutritional status, his nitrogen balance, serum protein, and total base.

### 3. Hemorrhage

The treatment of acute massive hemorrhage from peptic ulcer remains the most difficult problem in the field of ulcer surgery. Although prompt surgical intervention has been advocated from time to time, it is now generally agreed that it is better in the great majority of cases to treat the patient conservatively in the hope that the hemorrhage will subside spontaneously.

Hoerr, Dunphy and Gray<sup>5</sup> have presented a most rational plan for the management of these patients. The following brief outline is taken from their excellent paper and is the guide to our treatment at Togus.

The aim of the surgeon is basically simple. He should operate only in those patients who are bleeding to death despite medical treatment and trans-

fusions. The surgical recoveries from this group represent pure salvage, that is, they would not have recovered without operation.

Patients with acute hemorrhage are classified clinically, based upon the presence or absence of shock, the lowest hematicrit level recorded, and the estimated rate of hemorrhage, into four groups arbitrarily designated "moderate," "severe compensated," "severe uncompensated," and "exsanguinating." The one reliable criterion for prompt surgical intervention was found to be not the amount or duration of the hemorrhage, but the *rate* of blood loss and its effect on the circulation. Only the last group, "exsanguinating" hemorrhage, requires prompt surgical treatment, but all acute hemorrhage cases require the closest observation and treatment by a bedside team composed of internist and surgeon.

The one reliable finding which distinguishes the "exsanguinating" group is failure to maintain a stable circulation despite transfusions which amount to about 500 cc. every 8 hours.

In brief, the management of these patients recommended by Dunphy, et al,<sup>5</sup> and favored by our service, is as follows: Those patients who show no evidence of syncope or shock in the hospital are not considered candidates for emergency operation. Patients who are in shock on arrival or who develop syncope while in the hospital are regarded as potentially needing emergency surgery. Pulse and blood pressure are taken at 15-minute intervals and recorded. Depending on apparent need, whole blood transfusion of 500-1000 cc. is given and the subsequent course of the bleeding observed. If bleeding continues, transfusions are repeated at the rate of not more than 500 cc. every 8 hours. If the patient maintains a stable circulation under this regime, operation is withheld. If, however, syncope or hypotension develop despite transfusions of 500 cc. every 8 hours, it should be regarded that the rate of bleeding makes surgical intervention imperative. With this decision made, the rate of transfusion is increased and operation performed as soon as the circulation is stabilized. Transfusion should be continued until the bleeding is controlled surgically.

In the occasional patient with massive hemorrhage suggesting the necessity of emergency surgery, but in whom the source of the bleeding is in doubt, gentle fluoroscopic examination with a swallow of barium is recommended. If no definite surgical lesion can be demonstrated, operation should in most cases be withheld and the patient treated medically.

### 4. Intractability

This is a difficult term to define and it is probable that every clinic has its own set of criteria for intractability. In the usual sense it means failure to relieve distress and pain by medical management.



Intractability often involves varying degrees of perforation, obstruction, and hemorrhage. In this hospital it is applied to an individual case only after a thorough trial of medical treatment and after a combined study of the case by gastroenterologist, roentgenologist, and surgeon.

## THE OPERATIONS FOR DUODENAL ULCER

### 1. *Vagus Resection*

The true place of this procedure in the surgical treatment of peptic ulcer will not be definitely established until some years to come. Time and careful clinical study will show whether vagotomy is just a "flash in the pan" or whether it alone or combined with other maneuvers is a definite contribution to our therapeutic armamentarium. It has recently been suggested by Moore<sup>6</sup> that the role of vagotomy is protective rather than curative. As such, it may well have a lasting value. Until further evaluation of the procedure is available, the only indication for vagus resection alone recognized at present by our service is in the treatment of postoperative jejunal ulcer.

### 2. *Gastroenterostomy*

Although this operation has been widely discredited in the past ten years because of the frequency (20-25 per cent) with which it is associated with failure to cure the disease and with post operative jejunal ulcer, we hold the opinion with Heuer<sup>7</sup> and others that gastroenterostomy is an operative procedure of proven value, that there are definite indications for its use, and that, rather than being abandoned, it should probably be utilized more widely than is reflected in the present surgical thought of many of the larger clinics. Heuer,<sup>7</sup> in one of the most carefully compiled follow-up studies on the late results of ulcer surgery that have appeared, showed that the favorable results from gastroenterostomy in a long follow-up approached within 10 per cent those of gastric resection. The merit of gastroenterostomy, as stressed by Heuer is not alone that it achieves satisfactory results in 75 to 80 per cent of patients with an operative mortality of approximately 1 per cent, but that it permits secondary operations with a low mortality if it fails. Thus the higher percentage of unsatisfactory results of gastroenterostomy has to be weighted against the higher total mortality of gastric resection.

Moreover, in evaluating the two procedures today, the role of vagus resection, either as a protective measure at the time of gastroenterostomy, or as a secondary operation in the treatment of recurrent jejunal ulcer must be taken into consideration.

### 3. *Gastric Resection*

Gastrectomy has been well standardized. Most surgeons throughout the country are employing, with

individual modifications, the so-called subtotal resection, removing as much as possible of the lesser curvature, and reestablishing gastrointestinal continuity by means of a retrocolic, short proximal loop, termino-lateral gastrojejunostomy of either the so-called Polya or Hoffmeister types. Our experience has been largely with the Polya operation, which we have found a satisfactory procedure. Present day mortality for gastric resection in the larger teaching hospitals and clinics has been reported as well under 5 per cent. It must be remembered, however, that this low mortality does not necessarily apply to smaller hospitals scattered over the country or to the surgeon doing an occasional gastric resection. The results of the operation are reported as good in around 85 per cent of cases, but it is not without danger to life, and is followed in a small but definite postoperative group by persistent symptoms and in another smaller group by recurrent jejunal ulcer.

The exact mechanism by which gastrectomy accomplishes protection against further ulcer has never been definitely established. It would seem to resolve itself into (1) A reduction in the secretion of hydrochloric acid, or (2) neutralization of gastric acidity by the influx of duodenal secretions, or most probably by a combination of the two. A study of the literature with special reference to gastric physiology and the uniformly poor results of the "retained antrum" operation, would strongly suggest that the removal of the gastric antrum is the most important achievement of gastrectomy as compared to gastroenterostomy. Heuer,<sup>7</sup> in the follow-up study of ulcer surgery previously mentioned, suggested that the lasting good results from radical subtotal gastrectomy as compared to a less extensive resection were not sufficiently marked to justify the increased mortality associated with the more radical procedure.

The present tendency at this hospital is toward a less radical gastric resection, expecting the overall end results to be as good with a more easily accomplished anastomosis and a lessened operative mortality. It should be emphasized, however, that this modified resection must include the antrum, the pylorus, and the ulcer-bearing duodenum.

We have not had occasion to use the two-stage procedure recommended by McKittrick<sup>8</sup> and others, but believe it definitely indicated when the extent of the inflammatory process renders dissection of duodenum and closure of the stump hazardous.

### 4. *Gastroenterostomy with Vagus Resection*

A number of well-known surgeons<sup>9,10</sup> are using this operation in place of gastric resection in the treatment of complicated duodenal ulcer. The rationale behind the procedure is in the combination of a gastric drainage operation that in the past has proved effective in some 75-80 per cent of cases with the protection against recurrent ulceration thought to re-

side in division of the gastric vagi. Subdiaphragmatic vagotomy is not a difficult procedure in most cases and should add little, if any, to the mortality and morbidity of gastroenterostomy. The combined operative procedure is much easier for the surgeon and less hazardous to the patient than gastric resection. The disturbing feature of this procedure to the surgeon is in the fact that the protective influence of vagotomy has not been definitely proved, and the combination of these two therapeutic methods will confuse the final evaluation of vagus resection for some time to come.

There is considerable evidence already, however, that there is a definite and lasting place for this operative combination in the field of ulcer surgery.<sup>9, 10, 11</sup>

#### CHOICE OF OPERATION

The selection of an operative procedure to meet the needs of a particular patient depends largely upon the operator's experience with and attitude toward the various procedures and upon the physiological and pathological problem presented by the individual patient. There are no hard and fast rules for the selection of an operation, nor is there any arbitrary age limit beyond which any particular procedure is contraindicated. Age like disease is a matter of physiological changes. The surgeon must, however, have a general overall plan for the treatment of these people. There follows a brief statement of the present policy at Togus.

Gastric resection is reserved for the surgical treatment of gastric ulcer and for complicated duodenal ulcer in the young and in certain good risk patients in the older age groups. It is the operation of choice when surgery is indicated in the emergency treatment of exsanguinating hemorrhage, or in patients who have had repeated serious hemorrhages. As has been indicated previously, our present tendency is toward a less radical procedure than the so-called subtotal resection. This concept, of course, does not apply to gastric carcinoma, where the most radical procedure possible is utilized.

Gastroenterostomy with vagus resection is being utilized in place of gastrectomy in patients in the older age groups and in the poorer risk patients of any age.

Gastroenterostomy without vagotomy is used in a certain number of long obstructed, very poor risk patients with a low gastric acidity. Either a retrocolic or an antecolic hookup is used depending on the individual situation.

Vagus resection alone is reserved for the treatment of recurrent or jejunal ulcer following other operative procedures.

#### SUMMARY

A brief outline of the various surgical problems

arising from gastroduodenal ulcer has been presented, and the present attitude of the Surgical Service, V. A. Hospital, Togus, Maine, toward the solution of these problems has been indicated, including the use of a less radical form of gastrectomy and of gastroenterostomy combined with subdiaphragmatic vagotomy. References have been made to the recent literature upon which our present concepts are based. A short general bibliography is appended.

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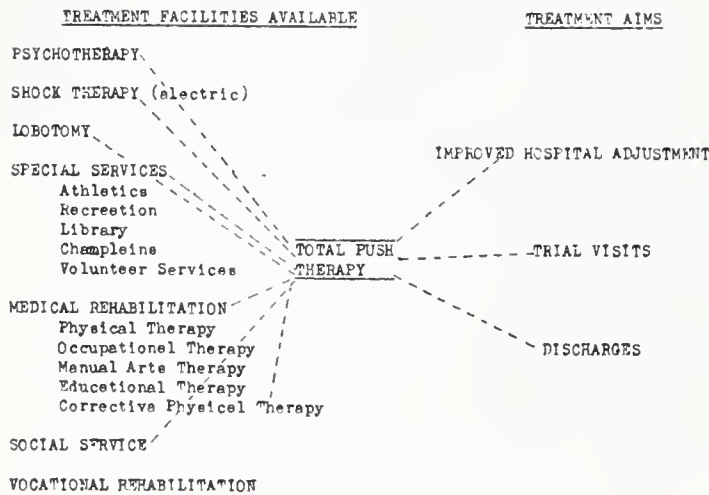
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Service for the Veteran at the Neuropsychiatric Hospital, Togus, Maine—Continued from page 127

Figure No. 2



As yet, group psychotherapy has not been instituted. Lobotomy has been recently instituted and it is anticipated that this procedure will be of great help in at least making better adjusted hospital patients. Lobotomy is being done only in selected cases, and only after the procedure is discussed personally with the patient's nearest of kin. Inasmuch as lobotomy is a relatively new procedure at this hospital it will be some time before results are known.

E. Results of Treatment.

The average length of stay of the patient hospitalized for neuropsychiatric illness at Togus is 224 days. This compares favorably with the national Veterans Administration Neuropsychiatric hospitalization average of days. A few statistics for the years 1946, 1947 and 1948 are of interest:

Year	Admissions	Discharges	Trial Visits
1946	392	220	69
1947	469	260	42
1948	383	263	100

As already indicated, only by being able to rehabilitate patients and send them back to their communities can beds be kept available for the admission of new patients. There is, however, a group of patients who by the very nature of their illness require chronic hospital care. Every effort is expended, within the means available, to include every patient in the hospital in one phase or another of the Total Push Program. With the passage of time and the increase of the average age of the veteran, it is anticipated that it will be necessary to care for patients with more chronic types of mental illness.

In some instances referring physicians have advised veterans to "go to Togus for a few days and get straightened out." In most instances it requires more than a "few days" to attempt to get at the roots of a patient's neuropsychiatric illness. Every effort is expended to rehabilitate the patient as soon as is possible. For the best utilization of available help and beds it has been a local policy to try to limit the admission of patients suffering from the effects of overindulgence in alcohol to those patients who have a psychosis associated with alcohol. It is recognized that alcoholism is frequently a symptom of an underlying personality disorder, but, with a limited number of beds and limited professional help, it is necessary to have a policy such as stated above.

The conception that the Neuropsychiatric Hospital at Togus is a place where a veteran can be sent for "safe-keeping" is erroneous. A patient can be held involuntarily only if he is psychotic and legally committed.

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## AMICROBIC PYURIA

### A Report of Two Cases

MEYER EMANUEL, M. D.\*

By the time the medical tyro has reached his senior year at medical school he has learned to chime glibly "frequency, nocturia, dysuria, urgency, hematuria and pyuria" and to associate with these the very satisfying cover-all but cloudy diagnosis of "cystitis." But not long after he is handed his diploma and with the advent of repeated clinical impacts that make him an experienced physician he discovers how diagnostically non-specific these symptoms can be.

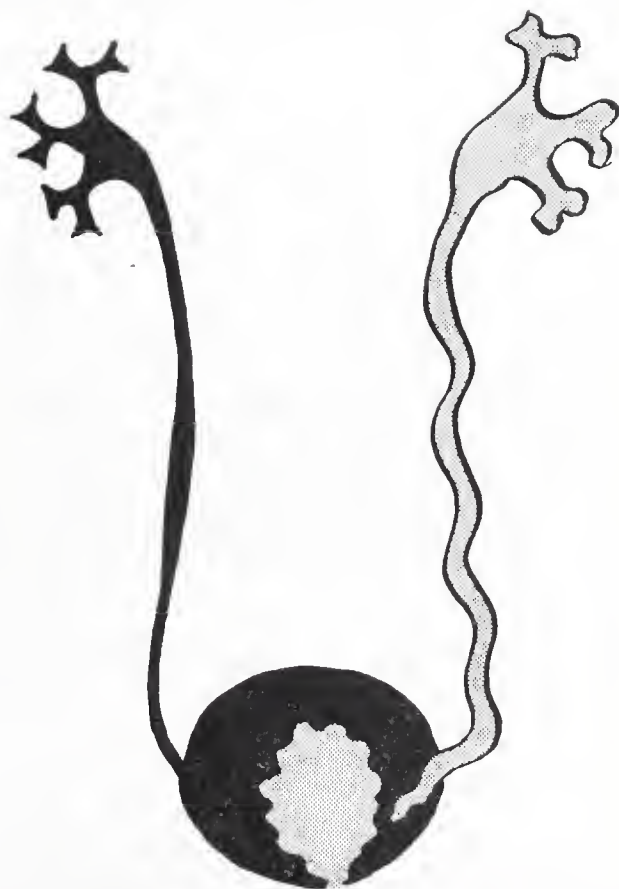
Exceptionally, in a young patient, and when these symptoms are of utmost severity he may venture a probable diagnosis of genito-urinary tuberculosis and carries out procedures to confirm or rule it out.

The recent war with its tremendous flow of young male patients into the Army, Navy and V. A. hospitals has brought into focus again a syndrome described in the early part of the century in Europe, and now recognized by American authors who have been reporting short series of cases. On first perusal the complaints of the patient are so highly suggestive of genito-urinary tuberculosis that genuine surprise is experienced when they are shown to point to an entirely different uncommon disease.

In 1909, Faltin reported such a case. Other Scandinavian authors followed with further reports and as noted before this picture has since been acknowledged as a definite entity in Europe. The confusion with tuberculosis of the genito-urinary tract is highlighted by Runeberg in his 1922 report for 30 such cases. Ten of these were nephrectomized but the kidneys failed to show evidence of tuberculosis. Some of the kidneys are said to have shown staphylococci imprisoned in the parenchyma. Peters, also in 1922, reported 15 cases in which five were nephrectomized. Again the pathological surprise was the negative findings for tuberculosis. There was only oedema of the mucosa with submucosal round cell infiltration, some follicle formation, plasma cells and a few neutrophils. The parenchyma was normal.

At present the syndrome is known as amicrobic pyuria, abacterial pyuria, sterile pyuria and acute interstitial cystitis. While it occurs with variations, the chief characteristics are: 1) a young male patient; 2) few systemic symptoms; 3) often no fever; 4) loss of strength, weight, appetite and sleep; 5) a urethral discharge; 6) urination as often as every 10 to 15 minutes day and night, extreme dysuria, urgency, strangury, and hematuria usually of the terminal type. Cystoscopy reveals a contracted intensely

inflamed bladder with a capacity of about 50 cc. covered with plaques and webs of exudate and sometimes showing areas of ulceration and polypoid oedema so prominent as to suggest neoplasm. The ureter orifices in some cases cannot be seen in the folds of edematous mucosa. Excretion urography shows good function on both sides, but the bladder is shrunk to the size of a golf ball and the ureters end abruptly and bluntly at the bladder as if by severe stricture or spasm with variable mild dilatation of the upper ureters and in some cases the renal pelves and



Schematic representation of the upper urinary tract and bladder in the normal and in Amicrobic Pyuria. The area in black is the normal, the shaded area is the diseased. Note the uretero-vesical junction in the latter.

calyces. Urine and urethral discharge cultures are sterile and repeated search for tubercle bacilli by smear, culture and guinea pig inoculation fails to demonstrate them. A number of probable etiological agents have been offered and these will be discussed later.

During the past three years at Togus, we have discovered only four patients with this clinical picture. The incidence is, therefore, small. Two of these are very typical and best illustrate this dramatic grouping of symptoms.

\* From the Urological Section, Department of Surgery, Togus, Maine.



## CASE REPORT NO. 1

This 22-year-old white male was admitted to Togus, Maine, March 10, 1947, complaining of excruciating penile and suprapubic pain, nocturia every 15 minutes, diuria every 30 minutes, strangury and total hematuria of about one week's duration. Past or recent gonorrhea was denied. While in Germany in the Spring of 1946, he had pneumonia. Six months later there was an onset of difficult painful urination, severe frequency day and night, urgency, tenesmus and hematuria. A urological study was done but cystoscopy was not carried out. He was given silver nitrate solution instillations or irrigations, two or three injections of penicillin and one of the sulfones was administered for two weeks. As a result of the sulfa drug, he developed a mild jaundice lasting about one week. Following this treatment there was complete cessation of the disturbance. He remained symptom-free until the present admission.

At the time of physical examination the temperature was normal. There was suprapubic tenderness but no renal tenderness. A left hydrocele (post-traumatic) was evident. The voided urine was grossly red in both portions of the two glass test obviously from blood. A #18 French catheter entered the bladder easily and there was no residual urine. The prostate gland was normal in size, boggy and somewhat more sensitive than average. A wet prostatic smear was not attempted because of the acuteness of the symptoms.

Culture of the bladder urine for pyogenic organisms was reported sterile. The routine urinalysis showed two plus albumen, a rare white cell and too many red cells to count in each high power field. Three consecutive 24-hour urines were negative for tubercle bacilli. The admission blood picture showed 6,700 white cells and 11.6 gms. hemoglobin. The blood Kahn test for syphilis was negative.

Excretion urography showed good function on both sides. *Both ureters were mildly dilated and redundant and ended abruptly by stricture or spasm at the bladder which was very small and irregular. The renal pelves were mildly distended, the infundibuli broadened and the calyces blunted.*

At cystoscopy the patient was extremely uncomfortable in spite of morphine, Depropanex and urethral topical anesthesia. The bladder was spastic and could not be distended beyond 60 cc. The bladder narrowed upward like a pear and the trigone appeared to be held in the vertical position. The ureter orifices were poorly visualized in the *plicated edematous mucosa which was deeply red and showed adherent masses of exudate.* Indigo carmine which had been given intravenously did not appear in the bladder after 17 minutes of observation. The posterior urethra showed granular change.

A diagnosis of chronic prostatovesiculitis in acute exacerbation and ureterovesical junction constriction



Case 1

Excretory pyeloureterogram showing the distended upper tracts, severely spastic bladder and constricted uretero-vesical junctions.

with bilateral mild ureteral and pelvic dilatation was made. Genito-urinary tuberculosis was entertained but up to this time certainly not proven. The temperature remained normal during the entire hospital stay. Further red and white cell counts were within normal levels. The blood sedimentation rate was 7 mm. per hour. Blood urea nitrogen and NPN were normal. X-ray of the chest showed obliteration of the right costophrenic angle by old pleuritic adhesions, but the heart and lungs were normal.

For the intense suprapubic and penile pain, it was necessary to give at least 17 doses of morphine. Belladonna and opium suppositories and codeine were not sufficient. Fluids were forced and sulfathiazole combined with sulfadiazine and sodium bicarbonate were given. Trasentine was also given to promote relaxation of the detrusor. A program of warm sitz baths alternating with warm rectal irrigations several times a day was carried out. When there was no significant improvement, bladder irrigations with boric acid and 5% argyrol instillations were employed but with no greater success. The bladder capacity at times fell to 30 cc. Penicillin in oil was then started.

By the 8th hospital day the pain became less intense, diuria was less frequent and nocturia fell to once per night. The bladder capacity rose to 100 cc. The urine showed 10-15 wbc/hpf but albumen and red cells were no longer present. By the 22nd hospital day, pain, frequency, nocturia and hematuria were completely gone. At this very time, however, the patient began to show a progressive jaundice, the

icteric index eventually reaching a maximum of 75. All medications were discontinued. The blood picture showed no significant changes. The cephalin flocculation test was 4 plus. Prothrombin time was 100% of normal, and the Van Den Bergh test was diphasic direct. The urines showed bile but no urobilin except in one later specimen. Because of the previous jaundice which followed administration of a sulfone, the medical consultant offered an impression of toxic hepatitis secondary to sulfathiazole and/or sulfadiazine. By the 36th hospital day the icteric index fell to 35. The patient felt very comfortable and refused to stay till his jaundice cleared completely. He was discharged against medical advice on the 37th day.

He was last seen in the out-patient department March 8, 1948. He was free from urinary symptoms and pains. The jaundice had disappeared shortly after leaving the hospital. Excretion urography showed normal upper tracts and a normally distended smooth-walled bladder of usual capacity.

#### CASE REPORT NO. 2

This 32-year-old male was admitted to Togus, Maine, January 26, 1948, complaining of dysuria, urinary frequency so extreme as to constitute a constant dribble, nocturia every 30 minutes, a thin stream, hematuria often as whole blood, and low back pain. Gonorrhea was denied. In 1943, he had meningococcus meningitis which was treated with sulfadiazine. One year before the present admission there was a brief urethral discharge negative for gonococci on smear and followed shortly after by intermittent total hematuria. There was an accompanying "cold" and after penicillin was administered there was a brief episode of joint pains. His eyes are said to have been "bloodshot," however, this had appeared occasionally for many years. Cystoscopy at that time showed a "polyp" but the visualization was said to be poor. In a follow-up study five months later, an intravenous urography was done and showed no pathology. Patient remained well until one month before the present admission when he had a return of the hematuria. Another cystoscopy again resulted in the finding of a "polyp." He was then referred to Togus, Maine.

Examination showed no renal tenderness. The prostate gland was not enlarged but soft and yielding and mildly sensitive. A wet prostatic smear showed 10-15 pus cells and many red cells in each high power field. There was a residual urine of 20 cc. which was cloudy. A later recheck showed no residual urine. There was no evidence of conjunctivitis or joint swelling with tenderness. The voided urine was turbid with 2 plus albumen and many white and red cells microscopically. Culture of the bladder urine for pyogenic organisms was sterile. The admission blood picture was within normal

limits; blood serology was negative for syphilis. The temperature was normal. Six 24-hour urine examinations for tubercle bacilli were negative. X-ray of the heart and lungs was normal.

Excretion urography showed excellent function on both sides with mild renal ptosis on the right causing no obstructive pathology. *The bladder was sharply contracted with irregular wall margins, and both ureters were mildly dilated and redundant and ended abruptly at the bladder junction by narrowing due to stricture or spasm.*



Case 2

Excretory urography again showing mild distension in the upper tracts, spastic bladder and constricted ureterovesical junctions.

Cystoscopy, during which the patient was very uncomfortable in spite of the usual preparation, showed a bladder capacity of only 70 cc. The bladder wall was spastic with the trigone appearing to be in a vertical position. There was considerable white exudate film adherent to the mucosa at many points. The mucosa was deeply red. Indigo carmine appeared from the ureter orifices by the end of seven minutes in 2 plus concentration but in sluggish spurts. There was no structure that could be identified as a polyp. Because of the sterile urine, absence of tubercle bacilli, the intense urinary symptoms, an extremely contracted bladder with dilated upper tracts on intravenous urography and an intensely inflamed low capacity bladder on cystoscopy, a diagnosis of amicrobial pyuria was made.

For control of the painful voiding belladonna, opium suppositories and codeine were adequate. The preliminary program of treatment consisted of sulfa-



thiazole and sulfadiazine with sodium bicarbonate, trasentine, bladder mixture, alkaline ash diet, penicillin in oil and forced fluids. The penicillin induced mild joint pains which disappeared rapidly. This was similar to his previous experience with penicillin at the start of treatment. Warm sitz baths alternating with warm rectal irrigations, bladder irrigations with boric acid, instillations of 5% argyrol or 1/4% protargol and a period of continuous tidal drainage using saline, acroflavin, and Solution G through a very narrow catheter were tried.

Response to all these measures was very discouraging. One month after admission the bladder capacity was still only 50 cc! The urinary PH ranged between six and eight, clots of blood still appearing in the urine. In the belief that so many therapeutic measures were tending to maintain an irritative state, all medications were then discontinued except those for pain and rest. By the 47th hospital day the capacity slowly rose to 125 cc., and on the 59th day to 200 cc., but the patient still had prominent frequency, nocturia and was indeed far from cured. On this day .04 gms. of Mapharsen was given intravenously and two days later a second dose of .06 gms. The capacity still was about 200 cc. but there was a distinct feeling of well being. For the first time since admission he began to feel truly comfortable. Nocturia fell to once per night. Six days later another .06 dose was given; the bladder capacity rose to 250 cc. No further arsenical was given. Eighteen days after the first injection the capacity rose to 500 cc. and still later to 600 cc. Cystoscopy was carried out with very little discomfort and showed an entirely normal bladder. Indigo carmine appeared from each side in 8 minutes in 4 plus concentration.

Culture of the bladder urine at this time showed *B. Coli*. An earlier culture sometime after admission had shown *staphylococcus aureus*. These were attributed to secondary infection incident to the necessary instrumentation. A five-day course of streptomycin was carried out in hopes of eradicating the *B. Coli*, but a culture of the urine taken four days before discharge still showed the organism. The patient, however, was completely asymptomatic.

He was recently seen during a brief follow-up examination on March 28, 1949, and stated that shortly after discharge from the hospital there was a mild left scrotal swelling which subsided, but otherwise he felt well. There was now, however, nocturia 1-3x and diuria up to once every hour, but no pain or burning on urination. The left globus minor was slightly tender but showed no nodulation. The prostate gland was small, symmetrical and elastic. The seminal vesicles could not be felt. Prostatic massage produced a very scanty thick secretion in which spermatozoa but no pus cells could be seen. The two glass test showed clear urine in both portions without shreds. The bladder capacity was 350 cc. Urinalysis

showed an alkaline reaction and a rare white cell per high power field. Urine culture showed gram negative bacilli, *B. Proteus* and *B. Coli*, Urea Splitting.

The two cases which are not reported presented the same X-ray and cystoscopic pictures, but differed in showing organisms on culture upon admission. However, both had been instrumented before being admitted here. Secondary infection could have occurred then. The finding of organisms, therefore, need not throw the cases out of this group. Hamm points out that staphylococci may be found on culture though not evident in the sediment. Numerous examinations of the urinary sediments in both cases were negative for tubercle bacilli. Confusion was thrown into one case by the finding of a positive guinea pig inoculation. Opportunity for recheck was not afforded because the patient felt so well he left the hospital. During the very acute stage, this same patient showed ulcerations of the mouth and glans penis and a bullous and hemorrhagic rash of the palms and soles. Neither case presented joint pains or conjunctivitis. Both patients underwent the regime of treatment described except that an arsenical was not used. There was slow recovery in which it is believed the trasentine was the most beneficial agent. Both left the hospital greatly improved with bladders of normal capacity.

#### DISCUSSION

Recent reports have suggested that amicrobic pyuria is a variation of Reiter's Disease, — another group of symptoms in which interest has been aroused during and since the past war. It is recognized by the triad of a urethral discharge, arthritis and conjunctivitis. The latter has been known to progress to keratitis and iritis. Additional features found in some cases are an elevated blood sedimentation rate, low grade fever, also vesicular, purpuric and suppurative lesions of the buccal mucosa, skin and glans penis. The disease was first described by Han Reiter in 1916 and many cases have been recorded since then. American authors have recently been submitting reports as they had previously done in the case of amicrobic pyuria. Both conditions have appeared almost exclusively in males in relation to military service, although one female case of Reiter's Disease is recorded.

In typical cases of both groups, pyogenic cultures of the urine and urethral discharges show no growth, and search for the tubercle bacilli by all known methods fails to disclose them. Attempts to discover probable agents by means of cultures, smears of scrapings from the buccal, penile and joint lesions, serological tests, cutaneous tests (DuCrey, Frei, Tuberculin, allergy), agglutination tests, fragility tests and dark field examination have all produced none of the known causative agents. Hans Reiter

thought a spirillum other than the *Treponema* of syphilis was responsible. Staphylococci have been incriminated; toxins from a distant focus of infection such as infected teeth and tonsils are also offered as a probable cause. A pleuropneumonia-like organism and enterotoxin are other suggestions. In 1947, Dunham and Rock noted that the picture represented by both syndromes shows no response to a wide variety of therapeutic agents and proceeded to investigate the probability of a virus origin. Using mice, they were able to produce conjunctivitis from material processed from the urethral discharge and eye secretion of a case with the classical triad of Reiter's Disease.

Apart from symptoms, the greatest resemblance in the two syndromes is the lack of response to treatment already noted. Sulfones, penicillin, streptomycin, salicylates, arsenicals, liver extract, foreign protein, bismuth, vitamins, gold salts, blood transfusions, bladder mixtures, trasentine, atropine, bladder irrigations and instillations with the familiar solutions have not given uniform satisfactory results in clearing the eye, joint, urethral or bladder symptoms. What seems to have been successful in one case fails to execute the same result in another. Indeed, many cases of both phases of this picture seem to have run a self-limited protracted course usually leaving no major sequelae. Similarly, in spite of past treatment recurrences have been noted. Where an arsenical (mapharsen, in the more recent reports) has sharply altered the course of the disease, in either Reiter's syndrome or amicrobic pyuria, its action has been dramatically rapid and practically specific. It is worth mentioning that staphylococci have been shown to exhibit good response to arsenicals.

#### SUMMARY

Attention is called to a clinical picture in young men of military age usually described as Amicrobic Py-

uria, characterized by a sterile urine, urethral discharge and urinary symptoms so intense as to suggest a diagnosis of genito-urinary tuberculosis which, however, cannot be supported because tubercle bacilli cannot be found.

Two illustrative cases are reported in detail.

A close relationship between Amicrobic Pyuria and Reiter's Syndrome is being recognized by more recent writers reporting cases of each group. Their points of similarity lie in the apparent etiology which may be a virus, sterile urine and urethral discharge, negative findings for tuberculosis, a protracted course and generally poor response to a wide variety of therapeutic agents with the exception of arsenicals which in some cases have altered the course of the disease dramatically. The implication of these authors is that Amicrobic Pyuria and Reiter's Syndrome are probably variations of the same disease entity with bladder and upper tract involvement at one end and conjunctivitis and joint pains at the other.

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Evidence of the success being achieved against tuberculosis, is afforded by the findings in Selective Service examinations in the two World Wars. In the earlier conflict, there were 29.8 cases of tuberculosis found per 1,000 selectees, whereas in World War II the incidence was down to 19.1, a drop of about one-third. The recorded reduction is undoubtedly an understatement, inasmuch as considerably better methods for the detection of the disease, including the large-scale use of chest X-ray, were used in the recent war. — *Statistical Bull., Metropolitan Life Insurance Co.*, Nov., 1948.

The first and greatest need is education; education of the people, and through them education of the State. It is evident that if every man and woman in the United States were familiar with the main facts relating to the manner in which tuberculosis is communicated and the simple measures necessary for their protection, not only might we reasonably expect as a direct result of this great knowledge, a great diminution in the death rate of the disease, but the people would soon demand and easily obtain effective legislation for its prevention and control.—Edward L. Trudeau, M. D., *Nat. Tuberc. A. Tr.*, 1905.



## MYASTHENIA GRAVIS WITH THYMOMA

### A Case Report

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#### INTRODUCTION

Ever since Walker<sup>1</sup> first reported on the clinical use of Prostigmine in myasthenia gravis in 1934, doctors have been interested in elucidating the pathological physiology of this condition, which has led to considerable new knowledge of nerve physiology and pharmacology. These new advances have been very well summarized by Nachmansohn<sup>2</sup> in a recent paper, in which he reports much original experimental work as well as a review of the evidence for the concept of acetylcholine as the universal excitor substance in all active cells, its incredibly rapid formation by choline acetylase and destruction by choline esterase, and the inhibition of the latter and resulting interruption of the mechanisms of stimulation and transmission by such drugs as eserine, strychnine, DFP, procaine, prostigmine and curare.

Briefly, in myasthenia gravis there is a physiologic lesion at the myoneural junction which results in a type of paralysis resembling curare poisoning. At a normal junction, acetylcholine is released by a motor nerve impulse, causes the muscle to contract, and is removed in about 1/1000 second by the cholinesterase normally present. In myasthenia, there is a blocking of the impulse at this point. It can be shown that the nerves conduct impulses normally and that the muscles respond normally to acetylcholine.<sup>3</sup> One can suppose that the failure is due to deficient acetylcholine formation, excess cholinesterase, or to the presence of a curare-like inhibiting substance. Careful search for such curare-like substances have been fruitless<sup>4</sup> and there is no excess of cholinesterase in the blood cells or plasma of myasthenic patients.<sup>5, 6</sup>

In any case, suitable doses of prostigmine will correct the situation and allow a normal muscle response to a nerve impulse. As this drug is known to inhibit cholinesterase thereby allowing acetylcholine to accumulate till it is present in effective amount, its action would be consistent with either of the first two mechanisms mentioned above.

#### CASE REPORT

A 53-year-old white male printer from Bath, Maine, was admitted for the seventh time to the Veterans Administration Hospital at Togus, Maine, on June 24th, 1948, with a chief complaint of sore throat, fever, cough and dyspnea of one week's duration. He was first admitted to this hospital in November, 1941, with a history of difficulty in eating of

6 months duration, consisting of frequent regurgitation of fluids through the nose, dropping of his jaw and inability to chew his food. He stated that he had to push his jaw up with his hand in order to chew. Examination at that time revealed he was well developed and nourished, his temperature was 98.6° Fahrenheit, pulse 80 and blood pressure 130/96. There was ptosis of the right eyelid and slurring of speech. He could not keep his mouth closed without supporting his jaw with his hand. Urinalysis, blood serology, and EKG were normal. X-ray of the chest revealed some pleural thickening at the left base but no active pulmonary lesions were seen. A diagnosis of neuritis and pleural thickening was made and he was treated with vitamins. He improved somewhat and was discharged in three weeks. The second admission was in December, 1941, for the same complaints, and examination revealed no change but general weakness is described on this occasion. Complete blood count and urinalysis were normal. The basal metabolism was zero. The cerebro-spinal fluid was under normal pressure and revealed 3 lymphocytes per cubic mm., a negative Pandy test, a negative Wasserman reaction and a flat colloidal gold curve. Numerous smears of his sputum were negative for acid-fast bacilli. A diagnosis of hysteria was added to those made on his first admission. After several months in the hospital and continued ptosis, regurgitation, generalized weakness and difficulty in chewing, a diagnosis of myasthenia gravis was made and treatment was started with ephedrine sulfate gr.  $\frac{3}{8}$  three times a day and one ampoule of prostigmine daily by hypodermic injection. The exact dose of prostigmine given during this period cannot be ascertained from the record. His response to this treatment was not dramatic but he gradually improved and was discharged in September, 1942. During the next 6 years, the patient was admitted on four occasions because of exacerbations of weakness associated with respiratory infections. The severity of his symptoms varied from time to time, but no new findings were discovered. It was found that 15 mg. prostigmine bromide orally 3 or 4 times a day gave him considerable relief. For one week prior to the final admission, he had considerable cough and expectoration. He stated that he could not seem to raise his sputum properly so that it remained in his throat, causing him to gag and choke.

Physical examination revealed a poorly nourished man who was alert and coöperative but quite weak.

The temperature was 98° F and the pulse 90. The respirations were 24 and somewhat labored. The pupils were round and equal, reacted well to light and the external ocular movements were all normal; fatigue tests were not performed at this time. Fundi were normal. The masseter muscles showed considerable wasting and the mouth could not be closed without manual help. The pharynx was red and granular and streaked with purulent exudate coming from above. The neck was weak but had full range of motion. The chest could be expanded normally but there was marked fatiguability so that the raising of tenacious exudate from the trachea and pharynx required a laborious effort which left the patient quite weak. There was considerable wasting of the shoulder girdle, especially the supraspinatus and deltoids, but the shoulder joints showed a full range of motion. The blood pressure was 128/90, the cardiac rhythm regular, the lungs clear. Examination of the abdomen, genitalia, rectum were not remarkable.

The extremities showed considerable weakness of the arm muscles, hand grip, quadriceps and peroneals. The back muscles were also quite weak; it took the patient several minutes of hard work to rise from a supine position and get off the examining table, but once done he could stand and walk fairly well. Tendon and superficial reflexes were normal. There was no edema. The skin was normal.

Laboratory examinations revealed urinalysis and blood serology were normal. The WBC numbered 15,500 per cubic millimeter with 88% polynuclear leucocytes. The hemoglobin was 15 gm.%. Two 24-hour specimens of sputum were negative on direct smear for tubercle bacilli.

X-ray of the chest showed a mildly tortuous aorta and a sharply outlined spot of calcium at the left apex. The left lower chest showed an elevated diaphragm and thickened pleura. Review of X-rays dating back to 1932 revealed no change in these findings.

The course in the hospital was short and stormy. During the first 3 hospital days he was treated with prostigmine bromide 15 mg. orally every two hours. He was quite comfortable and afebrile, and appeared to be recovering from his acute respiratory infection satisfactorily. On the fourth hospital day, his temperature suddenly rose to 101 and his pulse to 120. His cough became feeble and non-productive. Rales in the chest and cyanosis of the lips and nail beds were noted. He was given prostigmine methylsulfate ¼ mg. every hour and given oxygen by mask but respirations became feeble and stertorous. Prostigmine was increased to ½ mg. every hour with atropine sulfate gr. 1/150, and he was placed in a Drinker respirator. Despite the respirator and continued oxygen, he became increasingly cyanotic and died an hour later.

Autopsy was performed 2¼ hours after death. The body was still warm and rigor was absent. There was no obvious muscle atrophy and the subcutaneous fat was normal in amount. Upon opening the chest cavity, a tumor mass which was firm and lobulated was seen attached to the superior portion of the anterior pericardium. It was firmly attached and was not separated from the pericardium which was resected with the mass. This mass measured about 10 x 6 cm. and was about 2 cm. in thickness. It weighed 55 gms. and on cut section revealed a firm white, fibrous capsule which was continued into the mass in the form of septa separating five discrete nodular structures. One of the latter consisted of homogeneous, pale-brown, soft material which resembled peanut butter. The other lobules were composed of soft, whitish tissue containing numerous hemorrhagic areas. One small lobule appeared to be composed of dense, white, fibrous and fatty tissue without evidence of hemorrhage. The pericardium was smooth and glistening upon its interior surface and the heart appeared grossly normal. A small amount of clear, yellow fluid was present. The pulmonary artery was opened and a long thin clot was found which branched and extended for several cms. into each pulmonary artery. It was readily pulled out and it seemed to be very friable; to be red on its posterior surface and white on its anterior surface. This was interpreted as a post-mortem clot. The thyroid and parathyroid glands were normal. There were a few pleural adhesions at the left base. Each lung weighed 400 gm. and was air-containing, dry and spongy throughout. The heart weighed 280 gms. and was normal throughout. The abdominal viscera were all normal except that the gall bladder contained five soft white lobulated stones; no evidence of inflammation, scarring or obstruction of the biliary system. The genito-urinary system, brain and bone marrow were normal.

Histologic examination was performed by Dr. F. F. Ferguson of Portland, Maine, to whom I owe the following description: "Lungs: Extensive bronchopneumonia with some organization; many of the alveoli contain lipoid material probably due to aspiration; also, considerable bronchitis and bronchiectasis; lesions are similar in both lungs. Thymus: Sections of the mass seen grossly show the capsule to be composed of dense connective tissue with some hyalinization and a few areas of calcification. In addition, the mass is roughly divided into lobules by fibrous trabeculae with varying degrees of hyalinization. There are areas of cystic degeneration and some areas of hemorrhage. Blood vessels are numerous and some show hyaline changes in their walls. The cellular portions of the mass consist of varying mixtures of two types of cells; small dark round cells resembling small lymphocytes and large pale cells with reticular nuclei and abundant cytoplasm. These two



types of cell vary in their relative proportions in different parts of the tumor. In some areas a few well-formed Hassall's corpuscles also are present. Where the larger cells predominate, they sometimes are present in large groups with a few lymphocytes scattered among them; in other areas they tend to 'line-up' or palisade along connective tissue septa or around blood vessels with some pseudorosette formation. Hyaline degeneration of blood vessels walls and 'hyaline buds' are quite numerous. Mitotic figures are not found and the tumor does not appear malignant on microscopic examination.

"The other organs and tissues were not unusual. The cause of death in this case was undoubtedly the bronchopneumonia which increased the need for prostigmine in a patient who was suffering from myasthenia gravis but was previously fairly well controlled. The presence of the thymoma is characteristic of a fairly large percentage of cases of myasthenia gravis and it is possible that thymectomy earlier in his course might have had a favorable effect."

#### DISCUSSION

This case illustrates several features of myasthenia gravis which are worth emphasizing. In the first place, the chronic relapsing course with cyclic exacerbations and remissions is characteristic. As this is not a common condition, the diagnosis is not always considered at first, and in this case was mistaken for neuritis or hysteria for some time despite the classical symptoms of ptosis, regurgitation through the nose and inability to chew. The diagnosis is suggested by the clinical syndrome of abnormal fatigability without atrophy, palsy or sensory changes and the chronic cyclic course. It is confirmed by the prompt and dramatic response to prostigmine.<sup>8,7</sup> Occasionally in mild cases the exaggeration of symptoms caused by quinine and their relief by prostigmine may be helpful in confirming the diagnosis<sup>9</sup> but this should be done with caution as quinine may cause a dangerous degree of weakness leading to failure of respiratory muscles.

Treatment with prostigmine (Neostigmine U. S. P.) is often quite satisfactory, many patients being carried for years on 15 mg. tablets prostigmine bromide orally, taking 1 or 2 tablets every 2 to 4 hours during the day. For more severe involvement, prostigmine methylsulfate 1.5 mg. may be given subcutaneously every 30 minutes, if necessary to tide the patient over an emergency. Atropine is usually given with these doses as it does not interfere with the myoneural action but will inhibit the unpleasant side effects of parasympathetic stimulation caused by prostigmine.<sup>10</sup> In retrospect, our case was undertreated so far as dosage is concerned, although in view of the complications he had, it is unlikely that larger doses would have changed the outcome. The mode

of death is rather characteristic. Weakness of deglutition leads to aspiration, and weakness of respiratory muscles prevents adequate protection of the lungs by an effective cough so that these patients often develop aspiration pneumonio. Also in severe cases, the patient often becomes more or less refractory to even large doses of prostigmine. Other drugs such as ephedrine, guanidine, potassium chloride and glycine have been reported of some value in the past but are so much less effective than prostigmine that they are rarely used now. Eserine (physostigmine) has the same pharmacol action as prostigmine but the side effects are so severe they prohibit its use. One other drug, however, shows some promise of being helpful. This is di-isopropyl fluorophosphate, known as DFP, which is a synthetic chemical first developed as a war gas. It is a universal poison in large doses, its mode of action being strictly limited to the inhibition of cholinesterase.<sup>2</sup> However, in small doses, it produces a reversible inhibition very similar to that of prostigmine although the two are chemically unrelated. Its action is quite prolonged being two days to 2 weeks versus a few hours for prostigmine. Comroe<sup>11</sup> reports on the treatment of 5 cases of myasthenia gravis with DFP. He gave 2 to 3 mg. by intramuscular injection once or twice a week and found that general muscle strength was improved and that the patients required less prostigmine than before. Larger doses were found to produce nausea and vomiting. The basal effect of DFP did not inhibit a further prompt improvement in muscle strength following an injection of prostigmine and the latter drug was still needed by the more severe cases. This author felt that DFP was of some help in treating these patients but that it could not take the place of prostigmine in the more severe cases and was of little value in emergencies because of its slow action.

The pathology of myasthenia gravis has been essentially limited to the thymus gland. There is usually no muscle atrophy, and both nerves and muscles are normal histologically, except for collections of lymphocytes between the fibers of skeletal muscles which are found in some cases. Since the relationship between thymic tumor and myasthenia was first suggested by Weigert in 1901, many studies have appeared on this subject. McEachern<sup>4</sup> reviewed 257 cases of myasthenia who came to either surgery or autopsy, and found that 50% of them had some abnormality of the thymus; 20% were benign tumors and most of the rest were simple hyperplasia. Other authors have agreed with these figures in the main but have found up to 6% of the tumors were malignant<sup>12</sup> and some place the total abnormalities closer to 80% than 50%. Pharmacologic studies of these tumors have not revealed any substances resembling curare or choline-esterase.<sup>4</sup> One author reports producing a syndrome in dogs resembling myasthenia by repeated implantation of thymic tissue<sup>13</sup> but I can

find no confirmation of this work in the recent literature. Histologically they usually resemble the tumor found in this case, i.e. simple, benign thymomas. They may resemble lymphosarcomas but do not metastasize and are not radio-sensitive.

Attempts to detect the presence of these tumors by X-ray have been moderately successful: Good<sup>14</sup> demonstrated a tumor in 17% of 100 consecutive cases of myasthenia by the combined use of fluoroscopy and lateral films in addition to the usual postero-anterior projection.

It follows logically from the discussion above that the cure of myasthenia gravis by surgical excision of the thymus gland, whether normal or abnormal, would have attracted the chest surgeon. The best reports on this subject are those of Blalock,<sup>15</sup> Keynes<sup>16</sup> and Clagett.<sup>17</sup> These 3 series, in which the thymus was removed, total 100 cases; several others were operated on but no thymus could be identified. The operation used was a sternum-splitting incision with intra-tracheal positive-pressure anesthesia and was often a long and difficult procedure. Post-operative care was difficult in these patients. Exacerbations of their weakness often occurred requiring oxygen, respirator, aspiration of secretions because of ineffective cough, and large doses of prostigmine. A tumor was found in 27 patients, and persistent thymus tissue in the others. Of the 100 patients, 16 are described as cured, 46 as improved, 25 as unchanged and 12 died post-operatively. With 62% either cured or improved, it seems established that this is a rational treatment and confirms the idea that the thymus is somehow responsible for myasthenia. However, the difficulties of the operation and after-care are great, 25% of the surviving patients are not benefited, and in the best hands a 12% mortality has occurred, all of which leads one to consider surgery only in patients who are in fairly good condition, and probably only those in whom a definite thymic mass can be demonstrated.

#### SUMMARY

1. A brief review of the abnormal physiology of myasthenia gravis is offered.

2. A typical case of this disease who was found to have a thymoma at autopsy is presented.
3. Medical and surgical treatment of this condition is reviewed.

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The magnitude of the task which still lies ahead should not be underestimated. Tuberculosis even now takes more than 45,000 lives a year in our country, and is a serious cause of disability among men in the productive period of life. The disease still ranks high among the causes of death at most age periods.—Louis I. Dublin, Ph. D., *Health Progress*, 1936 to 1945, Metropolitan Life Insurance Co.

Malaria, smallpox, tuberculosis, venereal disease,

diphtheria, many others, could all be got rid of — from the whole world, without any further knowledge or research, if we had mental health and social health in the people of the world, if enough people in enough places could think in factual terms and had good mental health. Nothing keeps the diseases alive except ignorance and shortsighted self-interest. Long-sightedness would get rid of those things quickly — Brock Chisholm, M. D., *Mental Hygiene*, July, 1948.



## THE PRESIDENT'S PAGE

The calendar turns again, and there comes to an end a most pleasant experience and relationship. A year ago, I was sincere in expressing doubt relative to writing a President's Page—yet eleven have been forthcoming as opportunities arose to express helpful suggestions on matters of interest and importance to the members of the Maine Medical Association.

As I review the past year, I believe I am entirely correct in the statement that our State Association has progressed in unity of effort and in fostering more cordial relationship with the laity. Presentation of medical matters has been made with dignity and effectiveness before our legislative bodies in Augusta. Coöperation with the educational work of the American Medical Association has already brought better understanding of the ideals and value of present day medicine. This will surely increase as the campaign continues.

May I take this opportunity to thank all the officers of the Maine Medical Association and all the members who have helped make this year one of pleasant responsibility in the high office I have been allowed to hold. The future progress of the Association is assured by the continuing activity of men of exceptional stability and ability.

FORREST B. AMES, M. D.,

*President, Maine Medical Association.*

## EDITORIAL

### About the House of Delegates

The House of Delegates of the Maine Medical Association will meet on Sunday, June 19, at 3.00 P. M., and Monday, June 20, at 5.00 P. M., at the Poland Spring House, Poland Spring, Maine, during the 95th Annual Session.

In accordance with the Constitution, Article V, "The House of Delegates shall be the legislative body of the Association, and shall consist (1) of delegates elected by the component county societies, and (2) the officers of the Association . . ." i.e., the President, President-Elect, Secretary-Treasurer and Six Councilors. Thirty-five county delegates have been elected to represent their respective county societies at this year's meetings; which represents for each county society one delegate or one corresponding alternate for each twenty-five members or fraction thereof.

On the Agenda for the First Meeting is the appointment of a Reference Committee; the appointment of a Nominating Committee to draw up a slate of Standing Committees for 1949-1950; the Report of the Council for 1948-1949 to be presented by Dr. C. Harold Jameson, Council Chairman, who will also present the budget for 1949-1950, as recommended by the Council for action by the House; Reports of Councilors and Committee Chairmen not submitted for publication in the June issue of the JOURNAL; the Report of Dr. Thomas A. Foster, Delegate to the American Medical Association; Reports of Delegates to the New England Medical Society Meetings, and action on the Resolution presented at the 1948 annual session, which follows:

Therefore, Be it Resolved by the House of Delegates of the Maine Medical Association, in convention assembled, as follows:

To amend Article IV of the Constitution of the Maine Medical Association by adding at the end thereof the following: "And when recommended by his County Society, any member in good standing who has attained the age of seventy may, by vote of the House of Delegates, become a Senior Member of the Association, without further payment of dues, and without loss of any of the rights and privileges as members."

At the Second Meeting the Chairman of the Nominating Committee will present a slate of Standing Committees for 1949-1950 for action by the House; the Reference Committee Chairman will report relative to any matters referred to that committee; W. Mayo Payson, your Executive Secretary, will present his annual report, the suggested revision of the Constitution and By-Laws will be presented, and Councilors will be elected for the Fifth and Sixth Districts.

The Agenda for these meetings may seem somewhat routine at this time, but with the National Education Campaign just getting into swing with Dr. Martyn A. Vickers as Chairman, the Association's Prepaid Medical Care Plan fast becoming a reality, and other matters which are bound to come up, it behooves each county delegate to be present and assure his county society their proper representation.

All meetings of the House of Delegates shall be open to members of the Association. It is hoped that there will be a large number of non-delegates at these two meetings to see how the affairs of the Association are handled. (We assure all who are present that we welcome criticism, adverse or otherwise.)



## COUNTY SOCIETIES

### Androscoggin

President, LeRoy C. Gross, M. D., Auburn  
Secretary, Irving I. Goodof, M. D., Lewiston

### Aroostook

President, Rosario A. Page, M. D., Caribou  
Secretary, Clyde I. Swett, M. D., Island Falls

### Cumberland

President, Charles H. Gordon, M. D., Portland  
Secretary, Ralf S. Martin, M. D., Portland

### Franklin

President, Maynard B. Colley, M. D., Wilton  
Secretary, Paul E. Floyd, M. D., Farmington

### Hancock

President, James H. Crowe, M. D., Ellsworth  
Secretary, Charles H. Knickerbocker, M. D., Bar Harbor

### Kennebec

President, Harold E. Small, M. D., Augusta  
Secretary, Arch H. Morrell, M. D., Augusta

### Knox

President, Frederick C. Dennison, M. D., Thomaston  
Secretary, Frank W. Kibbe, M. D., Rockland

### Lincoln-Sagadahoc

President, Philip H. Sylvester, M. D., Damariscotta  
Secretary, Neil L. Parsons, M. D., Damariscotta

### Oxford

President, Roland L. McCormack, M. D., Norway  
Secretary, Dexter E. Elsemore, M. D., Dixfield

### Penobscot

President, Henry C. Knowlton, M. D., Bangor  
Secretary, Herbert C. Scribner, M. D., Bangor

### Piscataquis

President, John B. Curtis, M. D., Milo  
Secretary, Norman H. Nickerson, M. D., Greenville

### Somerset

President, Maurice E. Lord, M. D., Skowhegan  
Secretary, H. Carl Amrein, M. D., Madison

### Waldo

President, John A. Caswell, M. D., Belfast  
Secretary, Raymond L. Torrey, M. D., Searsport

### Washington

President, Willard H. Bunker, M. D., Calais  
Secretary, Karl V. Larson, M. D., East Machias

### York

President, J. Robert Downing, M. D., Kennebunk  
Secretary, C. W. Kinghorn, M. D., Kittery

## COUNTY SOCIETY NOTES

### Aroostook

The annual meeting of the Aroostook County Medical Society was held at the Vaughan House, Caribou, Friday, May 20, 1949, with eighteen members present.

Dr. Wilfred J. Comeau, of Bangor, presented a fine paper on Coronary Heart Disease.

The following officers were elected for 1949-1950:

President, Joseph A. Donovan, M. D., Houlton.

President-elect, Armand Albert, M. D., Van Buren.

Secretary-Treasurer, Clyde I. Swett, M. D., Island Falls.

Board of Censors: J. A. Donovan, M. D., Houlton; Gerald H. Donahue, M. D., Presque Isle; and W. Storer Boone, M. D., Presque Isle.

Delegates to the Maine Medical Association: P. L. B. Ebbett, M. D., Houlton; and Rosario A. Page, M. D., Caribou. Alternates: Thomas G. Harvey, M. D., Fort Fairfield; and Clyde I. Swett, M. D., Island Falls.

Stephen S. Brown, M. D., of Mars Hills, was accepted as a member by transfer from the Cumberland County Medical Society, and Melvin R. Aungst, M. D., of Eagle Lake, was admitted to membership.

Respectfully submitted,

CLYDE I. SWETT, M. D.,  
Secretary.

### Cumberland

A regular meeting of the Cumberland County Medical Society was held at the Maine General Hospital, Portland, April 28, 1949. The meeting was preceded by a clinic with the presentation of cases by the staff of that hospital and subsequently by a dinner.

The evening program was highlighted by Dr. Harry Solomon, Professor of Psychiatry at Harvard University, and Dr. George Schlomer of Baldpate Hospital, Georgetown, Massachusetts.

At this meeting, Dr. Edwin W. Gehring's resignation was read and approved. Voted to Associate Membership were: Dr. Stanwood E. Fisher, Dr. Henry L. Dyer, and Dr. Joseph A. Ridlon. Dr. Max E. Witte's resignation was accepted, as he has joined his local County Medical Society in Independence, Iowa, where he has recently been made Medical Superintendent of the Independence State Hospital.

Two new members were admitted; Dr. Harold A. Libby, a transfer from the Kennebec County Medical Society, and Dr. William T. Rowe, a transfer from Oxford County Medical Society.

Respectfully submitted,

RALF MARTIN, M. D.,  
Secretary.

### Hancock

A regular meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, May 11, 1949. There were 11 members present.

Dr. Norman E. Cobb, of Calais, reported on a recent meeting of the Council of the State Association.

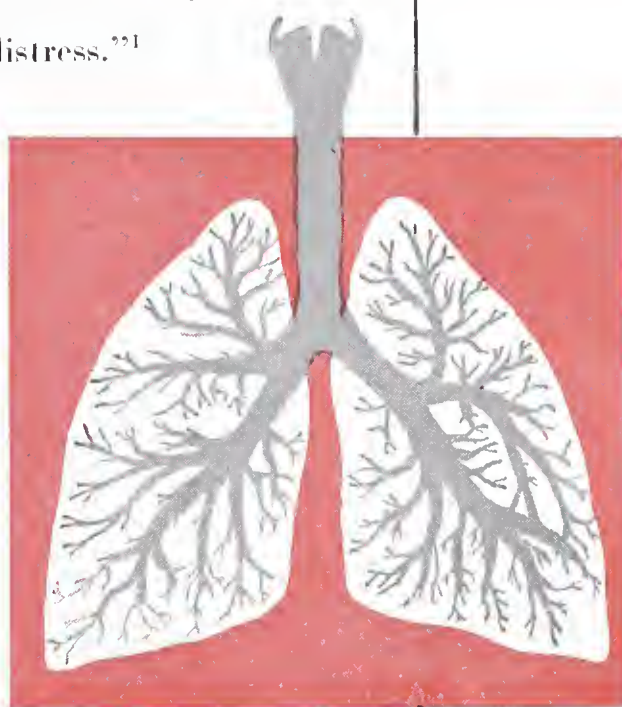
The matter of a Woman's Auxiliary to the Maine Medical Association was brought up by Dr. Crowe, discussed, and tabled.

Dr. Lyman C. Burgess, of Blue Hill, presented a case report of Leiomyoma of the Small Intestine. A brief discussion followed.

*Continued on page 146*

## paroxysmal dyspnea...

"When an acute attack of paroxysmal dyspnea sets in, Aminophyllin administered intravenously is generally sufficient to relieve the distress."<sup>1</sup>



In paroxysmal dyspnea, bronchial asthma, selected cardiac cases and Cheyne-Stokes respiration,

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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

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<sup>1</sup> L. Murphy, F. D.: Treatment of Cardio-vascular Emergencies in the Home. Wisconsin M. J. 42:769 (Aug.) 1943



*County Society Notes—Continued from page 144*

Dr. S. A. Coffin of Bar Harbor, and Dr. J. H. Crowe of Ellsworth, summarized their observations on recent advances in surgery as now practiced at the Cook County Hospital, Chicago. A discussion followed.

Respectfully submitted,

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Lincoln-Sagadahoc

A joint meeting of the Lincoln-Sagadahoc Medical Society and Dental Society was held at The Days, Newcastle, May 5, 1949.

It was moved and seconded that our local society go on record as in favor of compulsory vaccination in the State.

It was voted to send wires to our Senators and Congressmen that we oppose all forms of Compulsory Health Insurance.

The delegates to the Maine Medical Association meeting were instructed to suggest to the Society that we refuse to cooperate in any form of Compulsory Health Insurance.

Respectfully submitted,

NEIL L. PARSONS, M. D.,  
*Secretary.*

### Piscataquis

A meeting of the Piscataquis County Medical Association was held at Cleveland's Lodge, Monson, May 19, 1949. Twenty-two members and guests enjoyed a fine dinner at 6.30 P. M.

At the meeting it was voted that our delegate to the Maine Medical Association be instructed to consider lowering the fees of the Maine Medical Association.

It was voted that we express our appreciation of the good work the executive secretary of the Maine Medical Association has done during the last year.

It was voted that we request the Council of the Maine Medical Association to consider ways of getting State of Maine men into Medical Schools.

Remarks were made by Forrest B. Ames, M. D., President of the State Association; Martyn A. Vickers, M. D., Com-

cilor for this District; and Mr. Frank Curran, Director, Eastern Maine General Hospital, Bangor.

Respectfully submitted,

N. H. NICKERSON, M. D.,  
*Secretary.*

### York

A regular meeting of the York County Medical Society was held at Warren's Stardust Inn, Kittery, May 11, 1949.

The records of the previous meeting were read and accepted.

Dr. Carl E. Richards gave a report of the meeting of the Council of New England State Medical Societies, in Boston, March 27th.

Insurance plans were discussed and left to the delegates to take up at the State meeting.

Dr. Maurice Ross, of Saco, was appointed as Red Cross delegate.

Dr. Paul S. Hill, Jr., talked on insurance for doctors and their families. It was voted to take this up at the State Association meeting as a State plan.

Dr. William Mahaney was appointed as a committee on broadcasting against the National Insurance Plan.

Respectfully submitted,

C. W. KINGHORN, M. D.,  
*Secretary.*

### New Members

#### Aroostook

(Admitted May 20, 1949)

*Stephen S. Brown, M. D.,* Mars Hill, Maine (By transfer from Cumberland County Medical Society).

*Melvin R. Aungst, M. D.,* Eagle Lake, Maine.

#### Cumberland

(Admitted April 28, 1949)

*Harold L. Libby, M. D.,* Westbrook, Maine (By transfer from Kennebec County Medical Society).

*William T. Rowe, M. D.,* Portland, Maine (By transfer from Oxford County Medical Society).

## NOTICES

### State of Maine

#### Board of Registration of Medicine

Adam P. Leighton, M. D., 192 State Street, Portland, Secretary

List of physicians licensed to practice medicine and surgery in the State of Maine, March 9, 1949.

#### *Through Examination*

Melbourne J. Burnett, M. D., 67 Lincoln Street, Seekonk, Mass.

Frederic B. Champlin, M. D., Albion, Maine.

Richard D. Eckhardt, M. D., Boston City Hospital, Boston 18, Mass.

Andre Fortier, M. D., Hotel-Dieu Hospital, Quebec City, Canada

Christopher L. Landry, M. D., 21 Shaler Lane, Cambridge 38, Mass.

James V. McHugh, M. D., 55 West Street, Leominster, Mass.

Robert E. Newhouse, M. D., U. S. Naval Hospital, Chelsea, Mass.

Harry B. Walker, Jr., M. D., Waterbury Hospital, Waterbury, Conn.

#### *Through Reciprocity*

Donald H. Brown, M. D., 114 Fennbrook Road, West Hartford 7, Conn.

Edward M. Cook, Jr., M. D., York Harbor, Maine.

Ernest H. Files, M. D., Boston City Hospital, Boston 18, Mass.

John W. Friend, M. D., 9465 Ridge Boulevard, Brooklyn 9, N. Y.

George W. Hallett, Jr., M. D., 711 West 171st Street, N. Y. C.

Eli M. Lippman, M. D., U. S. Marine Hospital, 331 Veranda Street, Portland 3, Maine.

Pauline G. Starks, M. D., Auburn, Maine.

John E. Williams, M. D., 10515 Carnegie Ave., Cleveland 6, Ohio.

Harold A. Pooler, M. D., Bangor State Hospital, Bangor, Maine.

*Continued on page 158*

## NECROLOGY

**Ernest A. White, M. D.****1866 - 1949**

Death came suddenly on April 30, 1949, to Ernest A. White, prominent physician, practicing in Columbia Falls for nearly fifty-eight years. He was born in Columbia, Maine, September 1, 1866, the son of the late Mary Emily (Allen) and Augustus Springer White. When three years of age, the family moved to Columbia Falls, and he received his early education in the schools of that town. A period of teaching followed in the Towns of Centerville, Jonesboro, and Cutler, after which he entered Westbrook Seminary, Portland, Maine.

On April 11, 1891, Dr. White was graduated with honors from Jefferson Medical College in Philadelphia. In 1890, he had received a certificate for completion of special work in Diseases of Women at the Lying-In Charity, Philadelphia; and in 1897, a certificate from the Eye, Ear, Nose, and Throat Hospital of the New York Polyclinic.

On November 11, 1896, he married Miss Flora A. Bowles of Columbia Falls, who passed away August 13, 1945.

Dr. White began the practice of his profession immediately after graduation in Brockton, Massachusetts. Upon an invitation from the people of Columbia Falls, he returned to his home town in May of that year, and had been in active practice there and surrounding towns up to the time of his death.

In 1904, he was elected to the Board of Examining Surgeons for the Bureau of Pensions at Machias, serving ten years or to the termination of the Board. He was First Selectman of the Town of Columbia Falls from 1901-1908,

and has been Health Officer for Columbia Falls and Addison at various times.

Dr. White was a member of the American Medical Association and the Maine and Washington County Medical Associations. He was awarded a fifty-year service medal by the Maine Medical Association in 1941.

Dr. White's Masonic affiliations included membership in Tuscan Lodge, No. 106, A. F. & A. M.; Dirigo Royal Arch Chapter, No. 39; St. Elmo Commandery, Machias; all Scottish Rite Bodies in Bangor; and the Maine Consistory, A. A. S. R. 32 in Portland. He was a Noble of Anah Temple having been a charter member.

He is survived by one daughter, Florence Ernestine, of Columbia Falls, one sister, Mrs. Ira S. Sawyer of Portland.

Funeral services were held from the home on May 3 with Rev. John E. Pickens, Jr., officiating. Bearers were six young men of his home town, and burial was in the family lot in Hillside Cemetery. The many and beautiful floral tributes expressed a deep feeling for a man who was greatly loved and esteemed by the many in all walks of life who knew him.

Dr. White loved life, his profession, and he loved to serve all humanity. At the very beginning of his career, he started the habit of devoting a portion of his time each week to the study of his work, and that practice he continued to the very end of his life.

Whether in professional or civic affairs, Dr. White's thoughts and practices were those of a noble man.



## In Memoriam

### Members Deceased Since May 31, 1948

Clement, James D.,	Bangor
Clough, Dexter J.,	Portland
Coombs, George H.,	Waldoboro
Dolloff, David E.,	Biddeford
Fickett, Jerome P.,	Naples
Hanscom, Oscar E.,	Greene
Hardy, Theodore E., Jr.,	Waterville
Herlihy, Edward L.,	Bangor
Miner, Walter N.,	Calais
Pepper, John L.,	South Portland
Popplestone, Charles B.,	Fairfield
Sturtevant, James S.,	Dixfield
Thompson, Herbert E.,	Bangor
White, Ernest A.,	Columbia Falls

COUNCILOR REPORTS

First District

To the Officers and Members of the Maine Medical Association:

Stated meetings have been held by the York and Cumberland County Medical Societies during the course of a year; the programs have appeared in the JOURNAL. Of special interest was the Cumberland County meeting held January 27, 1949, which was a panel discussion of the Public Health matters. Invited speakers were three members of the Portland City Government, the Maine Commissioner of Health and Welfare, the Director of the State Bureau of Health and a member of the Maine Legislature.

Respectfully submitted,  
EUGENE H. DRAKE, M. D.,  
Councilor, First District.

Second District

To the Officers and Members of the Maine Medical Association:

As Councilor of the Second District, I attended the following County meetings:

On October 13, 1948, the annual meeting of the Oxford County Medical Society was held at Bethel Inn, Bethel, Maine. This meeting featured the election of officers, routine business and a panel discussion entitled "Joint Trauma," led by Drs. Leo McDermott, Joseph Geisen and Howard Apollonio.

On March 17, 1949, it was my pleasure to be present at a meeting of the Androscoggin County Medical Society, at which our President, Forrest B. Ames, M. D., gave a comprehensive and thoughtful discourse on the present agitation relative to socialized medicine.

Again on the evening of May 11, 1949, a generously representative meeting of the same society discussed with Dr. Martyn Vickers, the impending legislation of Federal Medical Control, and registered approval of the Voluntary Sick-ness Insurance Program.

The Franklin County Medical Society met at their hospital on May 21, 1949. Reorganization to some extent was necessary owing to the resignation of their secretary, who has gone for specialized studies, the secretarial duties of whom have been taken over by Dr. Paul E. Floyd, and renewed vigor in the society is imminent as a result.

Other highlights of the year's activities to be mentioned are: The first meeting of the Councilors and Scientific Committee at Lucerne, Maine, on August 1, 1948.

My success in eluding the State Police on slippery hills between Rumford and Augusta in their attempt (at the instigation of Dr. Carter) to halt me on my way to a cancelled meeting last January.

The subsequent two very business-like and harmonious gatherings of the Council for pertinent deliberation.

The sudden and untimely death of Dr. Edward L. Herlihy robbed our later Council meetings of the wisdom and experience of a dutiful, kind and generous gentleman, and left a perceptible void in the circle of our assembly.

Respectfully submitted,  
J. A. MACDOUGALL, M. D.,  
Councilor, Second District.

Fourth District

To the Officers and Members of the Maine Medical Association:

The medical societies of the Fourth District have all been active during the past year, and excellent programs have been presented at all of the county meetings.

There have been several graduates in medicine that have established themselves in the counties in this district and will practice their profession.

I have had no complaints from any member of this district and therefore have nothing unusual to report.

Respectfully submitted,  
FOSTER C. SMALL, M. D.,  
Councilor, Fourth District.

COMMITTEE REPORTS

STANDING COMMITTEES

Committee on Public Relations

To the Officers and Members of the Maine Medical Association:

The Committee on Public Relations beg leave to submit the following report for the year 1948-1949:

Several meetings of the Committee have been held during the year with 100% attendance. In addition, the members of the Committee have been contacted by correspondence.

The Committee undertook to cover the publicity relative to the fall clinical session, maintaining headquarters for news releases under the able direction of Dr. Bramhall. It is planned to cover the Annual Meeting at Poland Spring in a similar manner.

The Committee has been active in conjunction with the Health Council of Maine, which furnishes a valuable medium for educational purposes. In conjunction with the Council, a comprehensive list of speakers on various medical topics has been compiled, and is available through the facilities of the Health Council. Several matters of policy have been discussed in conjunction with the Executive Secretary, who has been most active in cooperating with the Committee.

It is hoped to have several group meetings in various parts of the State in order to brief speakers on the subject of government controlled medicine. It is vital to all concerned that the public have an intelligent conception of this problem we are facing. Liaison with the newspapers has been maintained through the facilities of the Health Council.

Respectfully submitted,  
FREDERICK T. HILL, M. D.,  
Chairman.

Legislative Committee

To the Officers and Members of the Maine Medical Association:

As Chairman of the Legislative Committee of the Maine Medical Association, I would report that your Committee has held no meeting during the year as there seemed to be no legislative matters coming up which in any way affected our Society. It is true the Chiropractors presented several bills before the Legislature but I fail to see how in any way they could affect our members, being chiefly a concern of the employers and insurance societies.



Your Executive Secretary, W. Mayo Payson, has been a great help in keeping our Committee informed of all Legislative matters affecting our Society.

Respectfully submitted,

P. L. B. EBBETT, M. D.,  
Chairman.

### Committee on Medical Education and Hospitals

*To the Officers and Members of the Maine Medical Association:*

According to Chapter 7, Section 5, of the Maine Medical Association, the Committee on Medical Education and Hospitals is active on questions referred to it by the same committee of the American Medical Association. No questions have been referred to our committee this year.

Respectfully submitted,

A. W. FELLOWS, M. D.,  
Chairman.

## SPECIAL COMMITTEES

### Tuberculosis Committee

*To the Officers and Members of the Maine Medical Association:*

One meeting was planned for September 3, 1948, at Western Maine Sanatorium. At this meeting, Dr. Francis J. Webber, Medical Director, Chief of Tuberculosis, Central Division, U. S. P. H. Service, was to be the principal speaker. The meeting was cancelled due to Dr. Webber being called back to Washington sooner than expected.

One meeting was held by the Tuberculosis Committee at Central Maine Sanatorium, December 2, 1948. Dr. Fisher gave a talk on the value of the X-ray surveys by the Department of Health's Mobile Unit, and its plans for the future. This was followed by a question period, and general discussion of methods of discovery, and follow-up of patients discharged from Sanatoriums.

Respectfully submitted,

LOREN F. CARTER, M. D.,  
Chairman.

### Conservation of Vision Committee

*To the Officers and Members of the Maine Medical Association:*

I wish to submit my report on the Conservation of Vision Committee as Chairman for this year.

The Committee has been in close coöperation with the Department of Health and Welfare in regard to Services for the Blind. We have been operating in an advisory capacity.

We will have a special meeting of the Committee at Poland Spring, Monday, June 20, at which time we have a guest speaker, Dr. Paul Chandler, who will speak on the glaucoma problem.

Respectfully submitted,

HOWARD F. HILL, M. D.,  
Chairman.

### Amy W. Pinkham Fund Committee

*To the Officers and Members of the Maine Medical Association:*

As Chairman of the Amy W. Pinkham Fund Committee, I would report that your committee held a meeting at Lake Sebec last summer at which four of the members were present. We were entertained by Dr. Carde at his cottage. Also

present was Dr. Wyman, Pediatrician from Boston, and your Executive Secretary, W. Mayo Payson.

We discussed very thoroughly how the income of the fund might be spent to the best possible advantage. This fund, as you know, was to be used for the use of the undernourished or tuberculous children of Maine, preferably those children from rural districts. By a Decree of the Probate Court it was determined that this fund should be spent by the Maine Public Health Association, Inc.

In our discussion, we decided that one of the best ways to make use of this fund was to supply pasteurized milk for the use of all undernourished children in rural schools. We discussed also the use of part of the fund for the purpose of educating the public to the advisability of the use of pasteurized milk as a preventive measure of tuberculosis. After discussing this matter with Mr. Payson, we decided that the use of this money for the latter purpose might be misconstrued and deemed by some not being spent for the purpose for which it was intended, so it was decided that we try to go along with the first plan; namely, furnishing milk to the undernourished school children.

The first part of December, 1948, I received a letter from Theresa R. Stearns, R. N., Executive Secretary of the Maine Public Health Association, stating that the accumulated income of the fund at that time was \$2,300 and that she thought this money might well be spent to provide teachers for children in State Sanatoria. We had thoroughly discussed this matter at our meeting at Sebec and had unanimously decided against it knowing that the fund was too small to do much good in this line and also believing that the education of children should be taken care of by the State Board of Education.

I wrote Miss Stearns and told her how our Committee felt about it and asked if we could not have the number and location of undernourished children attending schools in the State. I received no reply to my letter.

In November, 1948, Dr. Nickerson and myself met with Dr. Wyman and Mr. Mott, Executor of The Amy Pinkham Will, in Boston, and again we discussed spending this money for educational purposes in Sanatoria. Mr. Mott did not feel that the money was intended to be spent in this manner and seemed much opposed to the idea. They seemed to think that furnishing pasteurized milk to undernourished children would be a good way to make use of part of the income of the fund. They also advised a campaign through newspapers advocating the use of pasteurized milk as a preventive measure of tuberculosis. They did not feel, however, that we could legitimately use the income of the fund for this purpose.

Nothing constructive has been accomplished by your Committee.

Respectfully submitted,

P. L. B. EBBETT, M. D.,  
Chairman.

### Health Insurance Committee

The activities of the Health Insurance Committee during the year have been directed toward organization and operation of the Voluntary Prepaid Medical Insurance Plan approved by the House of Delegates in June, 1948. Policies and promotional literature from the five following companies have been approved:—Aetna, Paul Revere, Continental Casualty of Chicago, Equitable, and American Policyholders Insurance Company. Four of the companies will sell insurance to groups of employed persons. The fifth company plans to sell insurance to communities throughout the State. At least one of the insurance carriers plans to start operation early in June.

As of May 15, 38% of the members of the Maine Medical Association had filed acceptances for participation in the Plan. Letters have been sent in May to the remaining members of our Association who have not announced their willingness to participate.

Respectfully submitted,

EUGENE H. DRAKE, M. D.,  
Chairman.

Rural Health Committee

To the Officers and Members of the Maine Medical Association:

The Rural Health Committee felt, upon the surveys and investigations made the previous year, that the situation in Maine, so far as supply of medical services and hospital services was concerned, was not so serious as it has been in other parts of the Country.

Obviously, the greatest need concerning rural health lay in the lack of basic minimum local public health services. Any adequate program for these services would undoubtedly require appropriations and legislation by both the Federal and State Government. The Federal Government has such legislation in process, with bi-partisan support. No State activities could be undertaken until the requirements of the Federal legislation were determined.

Your Committee has not undertaken further activities, relating purely to rural health, because we have not had a clear picture of what we could hope to accomplish.

Respectfully submitted,

NORMAN H. NICKERSON, M. D.,  
Chairman.

Committee on Attendant Nurse Education

To the Officers and Members of the Maine Medical Association:

August 12, 1948—Preliminary meeting held with Harland Ladd, Commissioner of Education and Miss Helen Dunn, President of Maine Nurses' Association, at Augusta.

August 20, 1948—Proposed plan for attendant nurse education presented at the annual meeting of the Maine Hospital Association by Chairman Swett, Commissioner Ladd and Miss Dunn followed by general discussion. The program was unanimously approved by the Association and a committee was appointed to help in the development of the plan.

October 3, 1948—The program was presented at the annual meeting of the Maine Nurses' Association held in Bangor. The Association voted to approve the program and a committee was appointed to work in conjunction with the committees of the Maine Medical Association and the Maine Hospital Association and the State Department of Education.

November 10, 1948—A meeting of the Committee of the Maine Medical Association was held in Augusta for consideration of the program from the viewpoint of the medical profession and to study suggested changes made by the other groups.

November 16, 1948—A meeting was held with the Department of Education at Augusta.

November 23, 1948—A meeting of the combined committee was held at Augusta when a final drafting of the Bill for legislation was completed.

January 13, 1949—The Bill was presented to Senator Sam Collins and Representative Marion Longstaff for presentation to the Legislature.

February 8, 1949—Legislative Document No. 442, S. P. 269 was referred by the Senate to the Committee on Education.

March 9, 1949—A hearing on the Bill was held at Augusta without opposition and the Bill later came out of the Committee on Education approved.

When the Bill came up in the Senate for final action, it was killed along with many other educational bills due to inability of the Legislature to reach a decision to raise funds for needed legislation.

The need for this program will become more manifest as time goes on and it was sponsored by all major health groups in the State. For these reasons, should relief of our nursing shortage not take place in the interim, then every effort should be made to pass suitable legislation two years hence.

Respectfully submitted,

CLYDE I. SWETT, M. D.,  
Chairman.

Committee on Blood Transfusions

To the Officers and Members of the Maine Medical Association:

The Committee on Blood Transfusions has concentrated its efforts in two directions. The two major objectives of the committee were to attempt to extend the Blood Transfusion Service in a more efficient manner over a greater area of the State and to establish a uniform system among the existing blood banks.

As a result of replies to a questionnaire sent to all registered hospitals in the State it was felt that a number of hospitals believed that its transfusion service was inadequate. The committee felt that in some areas the transfusion service of existing blood-banks could be extended to improve this service. In other areas it was felt that the establishment of additional banks would be the best solution to the present deficiency. It is suggested that the County Medical Societies may be instrumental in establishing regional banks in those communities which are remote from any of the existing banks. The Transfusion Committee offers its assistance in establishing any such bank.

Wing Commander Roger Williams of the Civil Air Patrol has offered the services of the C. A. P. to deliver blood to any part of the State when an emergency situation exists.

In order to establish a unification of standards among the blood banks of this State, the Committee suggests the adoption of the following standards for all banks:

1. A physician shall be the director of each bank and will be responsible for the various activities of the bank.
2. No donor should be used whose hemoglobin is below 12.5 gms./100 cc.
3. No donor should be used whose temperature is above 99.4°F., whose pulse rate is over 90 per minute, or whose blood pressure is under 100/50 or over 200/120 mm. Hg.
4. No donor should be used who has ever had malaria unless he has been fifteen (15) years without malaria and has been at least two (2) years without suppressive treatment such as atabrine.
5. No donor should be used who has had jaundice in the previous ten years.
6. No donor is acceptable who is over 60 years of age.
7. Any donor under 21 years of age must have the written consent of one parent.
8. A donor who is pregnant or who has been pregnant within six (6) months should be rejected.
9. Donors having a major allergic state or active allergic state should be rejected.
10. Donors with any active rheumatic manifestations should be rejected.
11. Donors with an acute upper respiratory infection should be rejected. The throat of each donor should be examined by a physician.
12. No donors with a rash suggestive of exanthemata should be accepted.
13. No donor should be used who has a history or physical findings which might suggest recent active tuberculosis.
14. A history of Brucellosis should be reviewed by the physician before the donor is accepted.
15. Any donor with an enlarged spleen should be rejected.
16. Any donor with a large or tender liver should be rejected.
17. Open sores, open active infection, bizarre skin diseases (including lupus erythematosus, psoriasis, etc.) are sufficient cause for rejection.
18. A physician should always be in attendance when donors are being bled.
19. Examination of the genitalia is impractical and is not recommended. Blood from the donor should always be subjected to a serological test for syphilis. Only serologically negative bloods should be used for transfusions. In the rare instance where it might be necessary to use



the blood before the serological test is completed it is imperative that the test be performed on the donor's blood and that the result of this test be recorded on the permanent records. If this should be positive the recipient or some responsible person must be advised so that therapy can be instituted. A pilot tube containing a sample of donor's blood should accompany each bottle of stored blood.

All donors who have a doubtful or positive serology should be advised to have the blood test repeated. If the repeat test is confirmatory the donor should be advised to consult his physician.

20. Each patient receiving a transfusion should receive blood of his own group and type. All bloods should be grouped according to the A-B classification and should be typed according to the presence or absence of the Rho factor. No transfusion should be given without a preliminary cross-matching. This should be centrifuged or allowed to stand for at least twenty minutes before reported as compatible. If it is necessary to use Group O (universal donor) blood for a recipient not of this group, the A and B substances of Witebsky should be added to the blood to be administered. Rho positive blood should not be administered to an Rho negative recipient. This is particularly important to a female who has not yet passed the child-bearing age.
21. Because of the untoward effects of alcohol on a fasting person, particularly on one not accustomed to the use of this beverage, the committee recommends that fruit juices, coffee, tea, cocoa, milk or bouillon be substituted for spirits as nourishment for donors following the withdrawal of blood.
22. The Committee recommends a triple check system to insure that the proper blood reaches the proper recipient.

and to guard against the distribution of blood which is grossly below standard. The blood and label should be inspected by the technician who releases it from the bank, by the nurse who accepts it on the ward and by the physician who administers the blood.

23. The Committee recommends that neither dry nor moist heat be applied to the bottle of blood prior to or during the transfusion. It believes that it is desirable although not necessary to allow the blood to approximate room temperature before administration.

The Committee feels that there is no need at the present time to request the aid of the American Red Cross in establishing new blood banks in this State or in extending the services of those banks which are already in existence.

The Committee is now preparing a procedure to be recommended for the cleaning of transfusion apparatus. A classification of transfusion reactions is being prepared with the hope that it will be universally adopted by those in this State who are engaged in transfusion work. It is hoped that records of transfusion reactions will be kept by each group and submitted to the Committee for study in order that procedures may be adopted to reduce as far as possible the number of reactions.

The above recommendations were adopted by the Committee on Blood Transfusions at a meeting held in Bangor on May 16, 1949.

Respectfully submitted,

RICHARD C. WADSWORTH, Bangor,  
*Chairman,*  
JOSEPH E. PORTER, Portland,  
GILBERT CLAPPERTON, Lewiston,  
JOHN F. REYNOLDS, Waterville,  
JOSEPH A. DONOVAN, Houlton.

## REPORT OF THE SECRETARY-TREASURER

*To the Officers and Members of the Maine Medical Association:*

As your Secretary and Treasurer I am pleased to submit the following report.

There are 705 active members in good standing in the Association; 38 Honorary and five in Military Service. Forty-seven new members have been added to our roster during the past year. We have lost fourteen by death, and nine have resigned or moved out of the State.

The Cumberland County Medical Society sponsored the 1948 Fall Clinical Session, which was held at Portland, Maine, November 1 and 2. An excellent program was presented with Clinics at the Maine General Hospital, Maine Eye and Ear Infirmary, and Mercy Hospital. T. Duckett Jones, M. D., Medical Director, Helen Hay Whitney Foundation, Boston, Massachusetts, was the speaker at the Dinner Meeting. His subject was "Rheumatic Fever." There was a registered attendance of 134 members and guests.

The Ninety-fifth Annual Session of the Maine Medical Association will be held at the Poland Spring House, Poland Spring, Maine, June 19, 20, and 21. The program for this meeting, which has been arranged by Martyn A. Vickers, M. D., of Bangor, Chairman of the Scientific Committee, and members of his committee, is published elsewhere in this issue of the JOURNAL.

Fifty-Year Service Medals will be presented to the following members at the annual banquet Tuesday evening, June 21, by Forrest B. Ames, M. D., President; Albert D. Foster, M. D., Percy S. Merrill, M. D., Eugene D. Tapley, M. D., John B. Thompson, M. D., Walter E. Tobie, M. D., and Fitz E. Small, M. D.

Thirty-two companies have reserved Commercial Exhibit space for this session. I want to urge all in attendance to visit these exhibits, and in this way express the appreciation of the members of the Association to these companies who have contributed so generously.

To date, 524 members have paid the A. M. A. \$25.00 assessment, which has, with the exception of one county, been collected through this office in accordance with a vote of the Council.

The books of the Association and JOURNAL were closed and audited, as of this date, by Jordan and Jordan, Accountants and Auditors, and were found to be complete and correct in all details of record. Their complete report will be published in the July issue of the JOURNAL, but a summarized Financial Summary has been prepared in this office and sent to the Officers, Councilors and County Delegates.

Respectfully submitted,

FREDERICK R. CARTER, M. D.,  
*Secretary-Treasurer,*  
May 31, 1949,

# Program

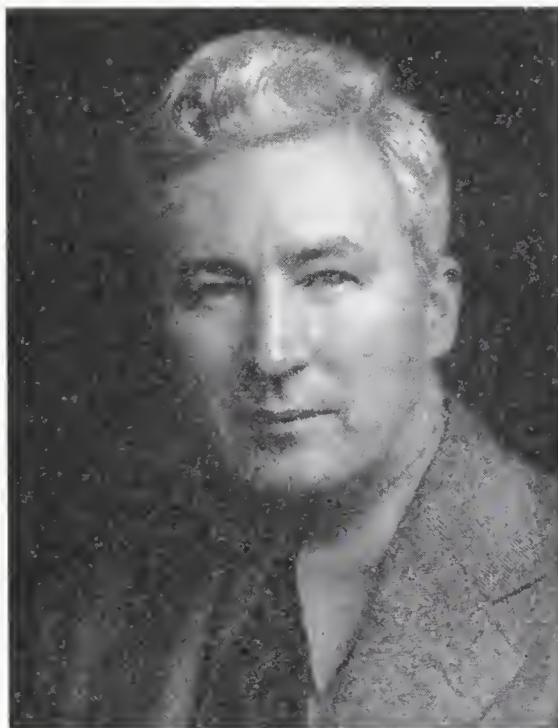
## 95th ANNUAL SESSION

### MAINE MEDICAL ASSOCIATION

JUNE 19, 20, 21, 1949     *at*     POLAND SPRING HOUSE

POLAND SPRING, MAINE

*Program Arranged by the Scientific Committee*



MARTYN A. VICKERS, M. D.,  
*Chairman*



## INFORMATION

## Registration:

Registration headquarters will be in the Lobby of the Poland Spring House. Every member and guest is requested to register and receive a badge on arrival.

## Papers:

All papers read before this Association shall be its property for publication in "The Journal of the Maine Medical Association," and when read shall be deposited with the Secretary, Dr. Frederick R. Carter.

The time allowed for the presentation of papers will be strictly observed.

## Visiting Delegates:

Introduction of Visiting Delegates will take place Monday afternoon, June 20th, at 4.30 P. M.

## Publicity:

Abstracts and notes to the Press are to be released only through the Committee appointed for the purpose: Frederick R. Carter, M. D., Portland, Chairman; and Forrest B. Ames, M. D., Bangor.

## Meeting Places:

Consult Bulletin Board.

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ARRANGED BY THE SCIENTIFIC COMMITTEE

Martyn A. Vickers, M. D., *Chairman*

Carl E. Richards, M. D.

Franklin F. Ferguson, M. D.

Frederick R. Carter, M. D., *Secretary, ex-officio*

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## SUNDAY, JUNE 19, 1949

3.00 P. M.

FIRST MEETING OF THE HOUSE OF DELEGATES

7.00 P. M.

DINNER

Guest Speaker:

Mack Murray, Mental Telepathist

## MONDAY, JUNE 20, 1949

9.30 A. M.

GENERAL ASSEMBLY:

President, Forrest B. Ames, M. D., presiding

Announcements:

Martyn A. Vickers, M. D., Chairman, Scientific Committee

Frederick R. Carter, M. D., Secretary

10.00-11.30 A. M.

ORTHOPEDIC CONFERENCE

Chairman, Martyn A. Vickers, M. D., Bangor

Moderator, Allan Woodcock, M. D., Bangor

Speakers:

Joseph Shortell, M. D., Boston

Subject: *Ankle Fractures and Other Trauma of the Ankle*

Edwin F. Cave, M. D., Boston

Subject: *Hip Fractures and Other Trauma of the Hip*

Otto J. Hermann, M. D., Boston

Subject: *Shoulder Fractures and Other Trauma of the Shoulder*

(Followed by Round Table discussion of Orthopedic Problems)

12.30 P. M.

LUNCHEON

A table will be reserved for Past Presidents of the Maine Medical Association

1.00-2.30 P. M.

EYE CONFERENCE

Chairman, Howard F. Hill, M. D., Waterville

Speaker:

Paul Chandler, M. D., Boston

Subject: *Glaucoma* (Followed by discussion)

ALLERGY CONFERENCE

Chairman, Martyn A. Vickers, M. D., Bangor

Speaker:

George Gaillard, M. D., White Plains, N. Y.

Subject: *Present Day Considerations in the Treatment of Poison Ivy*

PEDIATRIC CONFERENCE

Chairman, Albert W. Fellows, M. D., Bangor

Speakers:

D. H. R. Lester, M. D., Schenectady, N. Y.

Subject: *Pediatric Surgical Problems*

Stewart H. Clifford, M. D., Boston

Subject: *Diseases of the Newborn*

2.30 P. M.

SURGICAL CONFERENCE

Chairman, Carl E. Richards, M. D., Sanford

Moderator, William V. Cox, M. D., Lewiston

Speaker:

Arthur W. Allen, M. D., Boston

Subject: *Surgery of the Large Intestine*

Discussors: Isaac M. Webber, M. D., Portland

Gordon N. Johnson, M. D., Houlton

William V. Cox, M. D., Auburn

(Followed by question and answer period)

4.30 P. M.

INTRODUCTION OF VISITING DELEGATES

ELECTION OF PRESIDENT-ELECT

5.00 P. M.

SECOND MEETING OF THE HOUSE OF DELEGATES

7.00 P. M.

DINNER

Guest Speaker:

William Alan Richardson, Rutherford, N. J., Editor—"Medical Economics"

Subject: "Free Medicine in Britain"

## TUESDAY, JUNE 21, 1949

10.00-11.30 A. M.

MEDICAL CONFERENCE

Chairman, Franklin F. Ferguson, M. D., Portland

Moderator, Richard S. Hawkes, M. D., Portland

Speaker:

Chester S. Keefer, M. D., Boston

Subject: *Antibiotics* (A formal discussion on Antibiotics followed by a question and answer period)

12.30 P. M.

LUNCHEON

1.00-2.30 P. M.

PEDIATRIC CONFERENCE

Chairman, Alice A. S. Whittier, M. D., Portland

Speaker:

William Dameshek, M. D., Boston

Subject: *Anemia in Childhood*

EAR, NOSE AND THROAT CONFERENCE

Chairman, Frederick T. Hill, M. D., Waterville

Speakers:

George O. Cummings, M. D., Portland

John E. Whitworth, M. D., Bangor

Merton N. Flanders, M. D., Lewiston

Frederick T. Hill, M. D., Waterville

Subject: Discussion of Papers presented at the American Academy of Ophthalmology and Oto-laryngology, the American Laryngological, Rhinological and Otological Society, the American Laryngological Association, American Otological Society, and New England Otolaryngological Society

Moving Picture: *The Function of the Ear in Health and Disease*

2.00 P. M.

PRESIDENT'S ADDRESS

Forrest B. Ames, M. D., Bangor, President

2.30 P. M.

MEDICO-LEGAL CONFERENCE

Chairman, George L. Pratt, M. D., Farmington, Secretary

Speakers:

Francis W. McCabe, Chief, State of Maine Police

Mrs. Frances Glessner Lee

Subject: *The Nut Shell Laboratories*

Richard Ford, M. D., successor to Allan Moritz, M. D., Legal Department, Harvard Medical School. Dr. Ford will present interesting cases and pictures.

7.00 P. M.

ANNUAL DINNER

Presentation of Fifty-Year Medals by President Forrest B. Ames

Guest Speakers:

Governor Frederick G. Payne

Joseph S. Lawrence, M. D., Director, Washington Office, Council on Medical Service, American Medical Association

Subject: *Current Events in Medicine*

## SPECIAL NOTICES

### Fifty-Year Service Medals

Fifty-Year Service Medals will be presented to the following members Tuesday evening, June 21, at the Annual Dinner.

*Cumberland County Medical Society*

Albert D. Foster, M. D., Portland  
University of Michigan Medical School, 1899

Walter E. Tobie, M. D., Portland  
Bowdoin Medical School, 1899

*Kennebec County Medical Society*

Percy S. Merrill, M. D., Waterville  
New York University College of Medicine, 1899

*Penobscot County Medical Society*

John B. Thompson, M. D., Bangor  
Bowdoin Medical School, 1899

*Waldo County Medical Society*

Eugene D. Tapley, M. D., Belfast  
Long Island College of Medicine, 1899

*York County Medical Society*

Fitz E. Small, M. D., Biddeford  
Bowdoin Medical School, 1899

### Specialty Conferences

#### Monday and Tuesday at 1.00 P. M.

On Monday, June 20th, there will be an Eye Conference, Allergy Conference and Pediatric Conference.

On Tuesday, June 21st, there will be an Ear, Nose and Throat Conference, and a Pediatric Conference.

See the Official Program for details of these Conferences.

### Pediatric Conferences

#### Monday and Tuesday

It is hoped that a Pediatric Section can be formed consisting of all interested in child care. The chief objects shall be the improvement of child care in Maine and the dissemination of pediatric information. All interested are invited to attend.

## Golf Tournament

Francis A. Winchenbach, M. D., will serve as Chairman of the Committee on Arrangements for the Golf Tournament. There will be prizes for members, ladies and guests.

### Program for the Ladies

#### Registration:

Registration will be in the Lobby of the Poland Spring House. Please register and receive a program and badge on arrival.

#### Evening Programs, June 19, 20, 21:

You are invited to attend the Sunday, Monday and Tuesday evening meetings. (See Official Program, which precedes the Special Notices, for complete details.)

#### Monday, June 20:

12.30 P. M.—Luncheon. Tables will be reserved for you at the lower end of the main dining room.

2.30 P. M.—Organization meeting of the Woman's Auxiliary to the Maine Medical Association.

#### Tuesday, June 21:

9.15 A. M.—Cars will be available for trips to Lewiston and Portland.

2.30 P. M.—Maine Medico-Legal Society Conference. See program for details of this conference which you will probably want to attend.

4.00 P. M.—Tea at the Mansion House. Miss Mary C. Leo and Mrs. Esther M. Kennard are in charge of arrangements for the Tea, and have appointed the following committee to assist them:

Mrs. Forrest B. Ames  
Mrs. Ralph A. Goodwin  
Mrs. Martyn A. Vickers  
Mrs. C. Harold Jameson  
Mrs. Frederick R. Carter

#### Golf Tournament:

See notice relative to this Tournament

#### Information:

Special notices will be posted on the Bulletin Board.



## OFFICIAL DELEGATES — 1949

## County Medical Societies

## FIRST DISTRICT

## Cumberland County

*Delegates:*

(Two Years)

Harold J. Everett, M. D., Portland  
 Ervin A. Center, M. D., Steep Falls  
 George I. Geer, Jr., M. D., Portland  
 Carl E. Dunham, M. D., Portland  
 James M. Parker, M. D., Portland

(One Year)

Frank A. Smith, M. D., Westbrook  
 Francis M. Dooley, M. D., Portland  
 Franklin F. Ferguson, M. D., Portland

*Alternates:*

Charles R. Geer, M. D., Portland  
 George L. Maltby, M. D., Portland  
 John M. Bischoffberger, M. D., Naples  
 Maurice J. Dionne, M. D., Brunswick  
 Donald G. Wight, M. D., South Portland

## York County

*Delegates:*

James H. Macdonald, M. D., Kennebunk  
 Charles W. Kinghorn, M. D., Kittery  
 Carl E. Richards, M. D., Sanford

*Alternates:*

Paul S. Hill, Jr., M. D., Saco  
 William F. Mahaney, M. D., Saco  
 Edward W. Holland, M. D., Sanford

## SECOND DISTRICT

## Androscoggin County

*Delegates:*

(Two Years)

Paul R. Chevalier, M. D., Lewiston  
 Wedgwood P. Webber, M. D., Lewiston

(One Year)

John J. Busch, M. D., Mechanic Falls

## Franklin County

*Delegate:*

George L. Pratt, M. D., Farmington

## Oxford County

*Delegates:*

(Two Years)

Walter T. Dixon, M. D., Norway

(One Year)

Delbert M. Stewart, M. D., South Paris

*Alternates:*

William T. Rowe, M. D., Rumford  
 John A. Matheson, M. D., Bethel

## THIRD DISTRICT

## Knox County

*Delegate:*

Paul A. Millington, M. D., Camden

*Alternate:*

Freeman F. Brown, M. D., Rockland

## Lincoln-Sagadahoc Counties

*Delegate:*

Robert W. Belknap, M. D., Damariscotta

*Alternate:*

Francis A. Winchenbach, M. D., Bath

## FOURTH DISTRICT

## Kennebec County

*Delegates:*

Leon D. Herring, M. D., Winthrop  
 Frank B. Bull, M. D., Gardiner  
 William L. Gousse, M. D., Fairfield  
 Arch H. Morrell, M. D., Augusta  
 Charles E. Towne, M. D., Waterville

*Alternates:*

Kurt A. Sommerfeld, M. D., Gardiner  
 Kenneth W. Sewall, M. D., Waterville  
 Norman B. Murphy, M. D., Augusta  
 Aaron Cook, M. D., Waterville  
 John F. Reynolds, M. D., Waterville

## Somerset County

*Delegate:*

George E. Sullivan, M. D., Bingham

*Alternate:*

Howard L. Reed, M. D., Skowhegan

## Waldo County

*Delegate:*

Foster C. Small, M. D., Belfast

*Alternate:*

John A. Caswell, M. D., Belfast

## FIFTH DISTRICT

## Hancock County

*Delegate:*

James H. Crowe, M. D., Ellsworth

*Alternate:*

Philip L. Gray, M. D., South Brooksville

## Washington County

*Delegate:*

James C. Bates, M. D., Eastport

*Alternates:*

Oscar F. Larson, M. D., Machias  
 John T. Metcalf, M. D., Calais

## SIXTH DISTRICT

## Aroostook County

*Delegates:*

Rosario A. Page, M. D., Caribou  
 P. L. B. Ebbett, M. D., Houlton

*Alternates:*

Thomas G. Harvey, M. D., Fort Fairfield  
 Clyde I. Swett, M. D., Island Falls

## Penobscot County

*Delegates:*

William A. Purinton, M. D., Bangor  
 John J. Pearson, M. D., Old Town  
 George B. Weatherbec, M. D., Hampden Highlands  
 Lawrence M. Cutler, M. D., Bangor

## Piscataquis County

*Delegate:*

Ralph C. Stuart, M. D., Guilford

*Alternate:*

Guy E. Dore, M. D., Guilford

### Association Delegates to 1949 Annual Sessions

- American Medical Association**  
Thomas A. Foster, M. D., Portland
- Connecticut State Medical Society**  
Donald F. Marshall, M. D., Portland
- Massachusetts Medical Society**
- New Hampshire Medical Society**  
Paul S. Hill, Jr., M. D., Saco
- Rhode Island Medical Society**  
William Holt, M. D., Portland
- Vermont State Medical Society (1948)**  
Foster C. Small, M. D., Belfast

### Delegates from New England State Medical Societies

- Connecticut State Medical Society**  
Stanley B. Weld, M. D., Hartford  
Harold F. Morrill, M. D., Waterbury
- Massachusetts Medical Society**
- New Hampshire Medical Society**
- Rhode Island Medical Society**  
Francis J. King, M. D., Woonsocket
- Vermont State Medical Society**  
John H. Woodruff, M. D., Barre

## COMMERCIAL EXHIBITS

- Brewer & Company, Inc., 67 Union St., Worcester 8, Mass.**  
Paul C. Barton, M. D., Medical Director
- Buffington's, Inc., 8 Sudbury St., Worcester 8, Mass.**  
Representative, Mr. H. W. Smith.
- Burroughs Wellcome & Co., Inc., 9 and 11 East 41st St., New York 17, N. Y.**  
Representatives, Mr. J. W. Rickards and Mr. R. L. McQuillan
- Elmer N. Blackwell, Surgical Appliances, 565 Congress St., Portland, Me.**
- C. B. Fleet Co., 921-927 Commerce St., Lynchburg, Va.**  
Representative, Mr. Raymond S. Carman
- Ciba Pharmaceutical Products, Inc., Summit, N. J.**  
Mr. H. M. Bilden
- Davies, Rose & Co., Ltd., 22 Thayer St., Boston 18, Mass.**  
Representative, Mr. Frederick L. Moulton
- F. A. Davis Company, 1914-1916 Cherry St., Philadelphia, Pa.**  
Representative, Mr. R. M. Richter
- General Electric X-ray Corporation, 535 Commonwealth Ave., Boston 15, Mass.**  
Representative, Mr. W. I. Brown
- George C. Frye Company, 116 Free St., Portland, Me.**  
Representatives, Mr. Milton S. Kimball, Mr. Hubert A. Honan, Mr. Sidney F. Cheney, Mr. Claude W. Lamson, Mr. Millard C. Webber, Jr.
- Lantien Medical Laboratories, Inc., 900 No. Franklin St., Chicago 10, Ill.**  
Mr. B. C. Bauer
- Lederle Laboratories, 30 Rockefeller Plaza, New York 20, N. Y.**  
Representatives, Mr. Raymond Cardinal, Mr. C. T. Johnson, Mr. Rocco Maffei, Mr. Kenneth Morrill
- Eli Lilly & Company, Indianapolis 6, Ind.**  
Representative, Mr. R. J. Dalton
- M & R Dietetic Laboratories, Inc., Columbus, Ohio.**  
Representative, Mr. Charles E. Quinn
- E. F. Mahady Company, 851-9 Boylston St., Boston 16, Mass.**  
Representative, Mr. Chase Langmaid, Jr.
- Maine Surgical Supply Company, 10 Longfellow Sq., Portland 3, Me.**  
Representatives, Mr. Carleton Haley, Mr. Richard Lund, Mr. Leo Curran, Mr. John H. Lacy
- Mead Johnson & Company, Evansville 21, Ind.**  
Representative, Mr. Angus D. MacLean
- Philip Morris & Co., Ltd., Inc., 119 Fifth Ave., New York 3, N. Y.**  
Mr. W. F. Greenwald, Research Director
- Pickering X-ray Corporation, 300 Fourth Ave., New York 10, N. Y.**  
Mr. T. A. Ludwig
- Schering Corporation, 2 Broad St., Bloomfield, N. J.**  
Representatives, Mr. Herbert A. Lohrman and Mr. Michael Gannino
- Schenley Laboratories, Inc., 350 Fifth Ave., New York 1, N. Y.**  
Representatives, Mr. A. F. DeBoyes and Mr. P. F. Curran
- G. D. Searle & Co., P. O. Box 5110, Chicago 80, Ill.**  
Representatives, Mr. John J. Pash and Mr. H. J. Warnecke
- E. R. Squibb & Son, 745 Fifth Ave., New York 22, N. Y.**  
Theresa M. Bendas
- Surgeons' & Physicians' Supply Co., 761 Boylston St., Boston 16, Mass.**  
Representatives, Mr. Charles H. Joy and Mr. David T. Fenner
- The Borden Company, 350 Madison Ave., New York 17, N. Y.**  
Representative, Mr. O. Elmer Ostberg
- The DoHo Chemical Corporation, 100 Varick St., New York 13, N. Y.**  
Representative, Mr. Irving J. Hahn
- The National Drug Company, Philadelphia 44, Pa.**  
Representative, Mr. C. E. Lewis
- The P. J. Noyes Company, Lancaster, N. H.**  
Representative, Mr. James L. Dow
- Thomas W. Reed Company, 91 Massachusetts Ave., Boston, Mass.**  
Representative, Mr. John F. Walsh
- U. S. Vitamin Corporation, 250 East 43rd St., New York 17, N. Y.**  
Mr. B. A. Fuchs
- W. B. Saunders Company, West Washington Sq., Philadelphia 5, Pa.**  
Representative, Mr. Joseph Juneman
- Winthrop-Stearns, Inc., 170 Varick St., New York 13, N. Y.**  
Representatives, Mr. Robert W. Blanchard and Mr. F. J. Coughlin



Notices—Continued from page 146

## Department of Health and Welfare

### Division of Mental Health

#### Clinic Schedule

The Division of Mental Health offers psychiatric clinic service to children and adults in the following cities:

*Portland* — Health and Welfare Department, 178 Middle Street. Every Tuesday.

*Lewiston* — Out-Patient Department, Central Maine General Hospital. 2nd and 4th Mondays.

*Augusta* — Bureau of Health, Division of Mental Health. By appointment.

*Waterville* — Out-Patient Department, Thayer Memorial Hospital. 2nd Thursday, 4th Wednesday.

*Bangor* — Out-Patient Department, Eastern Maine General Hospital. 1st Wednesday afternoon.

Valentine School, Union Street. 1st Thursday.

A traveling clinic visits the following towns and cities at irregular intervals: Brunswick, Caribou, Farmington, Fort Kent, Houlton, Lincoln, Machias, Old Town, Presque Isle, Rockland, Rumford and South Paris. All clinics are staffed by a psychiatrist and psychologist.

Referrals may be made by private physicians, parents, families, social agencies, school superintendents, Department of Education, all divisions within the Department of Health and Welfare. Application blanks may be obtained from the main office of the Division of Mental Health — State House, Augusta.

Patients are seen by appointment only. Each child must be accompanied by a parent or guardian. Applications should be sent to the Director, Division of Mental Health, Department of Health and Welfare, State House, Augusta, where all appointments are made.

Continued on page 172

## HOSPITAL STAFF MEETINGS

Open to the Profession

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General	1st Monday
	St. Mary's General	2nd Monday
Portland	Maine Eye and Ear Infirmary	1st Tuesday
	Maine General	2nd Friday
	Mercy	3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters	2nd Tuesday
	Thayer	Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.

# OFFICIAL ROSTER



## MAINE MEDICAL ASSOCIATION



MEMBERS

HONORARY MEMBERS

MEMBERS IN MILITARY SERVICE



COUNTY AND ALPHABETICAL LISTING



*MAY 31, 1949*



## ANDROSCOGGIN COUNTY

## ACTIVE MEMBERS

Anderson, Donald L.,	54 Pine St., Lewiston
Archambault, Philip L.,	75 Mill St., Auburn
Beeaker, Vincent H.,	85 Wood St., Lewiston
Beliveau, Bertrand A.,	100 Pine St., Lewiston
Beliveau, Romeo A.,	89 Pine St., Lewiston
Bernard, Romeo A.,	26 Beacon St., Lewiston
Bousquet, Jean J.,	91 Bartlett St., Lewiston
Brien, Maurice	80 Pine St., Lewiston
Brooks, Glidden L.,	1740 Bainbridge St., Philadelphia 46, Penna.
Buker, Edson B.,	80 Goff St., Auburn
Busch, John J.,	105 Elm St., Mechanic Falls
Call, Ernest V.,	118 Pine St., Lewiston
Caron, Frederic J.,	174 Bates St., Lewiston
Cartland, John E.,	117 Goff St., Auburn
Cattley, Amy L.,	477 Main St., Lewiston
Chapin, Milan A.,	237 Turner St., Auburn
Chenery, Frederick L., Jr.,	Monmouth
Chevalier, Paul R.,	240 Lisbon St., Lewiston
Clapp, Waldo A.,	215 College St., Lewiston
Clapperton, Gilbert	20 Ware St., Lewiston
Cox, William V.,	133 Court St., Auburn
DuMais, Alcid F.,	125 College St., Lewiston
Fahey, William J.,	17 Frye St., Lewiston
Flanders, Merton N.,	344 Main St., Lewiston
Fortier, Paul J. B.,	70 Pine St., Lewiston
Frost, Robert A.,	2 Goff St., Auburn
Gauvreau, Horace L.,	82 Pine St., Lewiston
Giguere, Eustache N.,	108 Cedar St., Lewiston
Goldman, Morris E.,	487 Main St., Lewiston
Goodof, Irving I.,	300 Main St., Lewiston
Goodwin, Ralph A.,	56 Dennison St., Auburn
Gottlieb, Julius,	210 College St., Lewiston
Grant, Alton L., Jr.,	133 Court St., Auburn
Greene, Merrill S. F.,	466 Main St., Lewiston
Gross, Leroy C.,	19 Goff St., Auburn
Haas, Rudolph,	488 Main St., Lewiston
Harkins, Michael J.,	437 Main St., Lewiston
Higgins, Everett C.,	149 College St., Lewiston
Hirshler, Max,	85 Pine St., Lewiston
James, Chakmakis,	47 Howe St., Lewiston
Lynn, Geraldine,	74 Pierce St., Lewiston
Mandelstam, Abe W.,	17 Wakefield St., Lewiston
Martel, Dominique A.,	460 Sabattus St., Lewiston
Methot, Frank P.,	256 Lisbon St., Lewiston
Miller, Clark F.,	300 Main St., Lewiston
Miller, Hudson R.,	11 Turner St., Auburn
Moore, Valentine J.,	300 Main St., Lewiston
Nadeau, J. Paul,	91 Pine St., Lewiston
O'Connell, George B.,	11 Lisbon St., Lewiston
Poulin, J. Emile,	198 Lisbon St., Lewiston
Pratt, Harold S.,	Livermore Falls
Rand, Carleton H.,	219 Oak St., Lewiston
Rand, George H.,	Livermore Falls
Randall, Ray N.,	19 Sabattus St., Lewiston
Rock, Daniel A.,	477 Main St., Lewiston
Rowe, Gunthner H.,	Livermore Falls
Roy, Leopold O.,	54 Pine St., Lewiston
Russell, Blinn W.,	98 Pine St., Lewiston
Russell, Daniel F. D.,	Leeds
Spear, William,	Lisbon Falls
Steele, Charles W.,	472 Main St., Lewiston
Sweatt, Linwood A.,	48 Drummond St., Auburn
Thacher, Henry C.,	11 Turner St., Auburn
Thomas, Camp C.,	Greene
Tibbetts, Otis B.,	33 Court St., Auburn
Tousignant, Camille,	111 Pine St., Lewiston
Ulpts, Reynold G. E.,	67 Webster St., Lewiston
Viles, Wallace E.,	Turner
Webber, Wedgwood P.,	376 Main St., Lewiston
Williams, James A.,	40 Pleasant St., Mechanic Falls

## HONORARY MEMBERS

Hayden, Louis B.,	Livermore Falls
Peaslee, Clarence C.,	42 Goff St., Auburn
Plummer, Albert W.,	Lisbon Falls

Renwick, Ward J.,  
Webber, Wallace E.,

102 Goff St., Auburn  
297 Main St., Lewiston

## AROOSTOOK COUNTY

## ACTIVE MEMBERS

Albert, Armand,	193 Main St., Van Buren
Albert, Joseph L.,	Fort Kent
Ascher, David S.,	Patten
Berrie, Lloyd H.,	Caribou
Boone, Storer W.,	Presque Isle
Brown, Stephen S.,	Mars Hill
Burr, Charles G.,	Houlton
Carter, Loren F.,	Presque Isle
Damon, Albert H.,	Limestone
Doble, Eugene H.,	6 Church St., Presque Isle
Donahue, Gerald H.,	Presque Isle
Donahue, Clement L.,	22 Main St., Caribou
Donovan, Joseph A.,	Houlton
Ebbett, Penry L. B.,	Houlton
Faucher, Francois J.,	Grand Isle
Gagnon, Bernard H.,	Houlton
Gormley, Eugene G.,	Houlton
Gregory, Frederick L.,	16 High St., Caribou
Griffiths, Eugene B.,	Presque Isle
Grow, William B.,	Presque Isle
Harvey, Thomas G.,	164 Main St., Fort Fairfield
Hogan, Chester F.,	Houlton
Huggard, Leslie H.,	Limestone
Johnson, Gordon N.,	Houlton
Kimball, Herrick C.,	Fort Fairfield
Kirk, William V.,	Eagle Lake
Labbe, Onil B.,	Van Buren
LaPorte, Paul C.,	Edmundston, N. B.
Larrabee, Fay F.,	Washburn
Levesque, Romeo J.,	Frenchville
Madigan, John B.,	Houlton
Merrick, John R.,	17 South Main St., Caribou
Page, Rosario A.,	Sweden St., Caribou
Proctor, Ray A.,	3 Teague St., Caribou
Reynolds, Arthur P.,	181 Main St., Presque Isle
Savage, Richard L.,	Fort Kent
Somerville, Robert B.,	264 Main St., Presque Isle
Somerville, Wallace B.,	Mars Hill
Swett, Clyde I.,	Island Falls
Toussaint, Leonid G.,	Fort Kent
Webber, John R.,	Houlton

## HONORARY MEMBERS

Albert, Louis N.,	Van Buren
Kalloch, Herbert F.,	Fort Fairfield
Sincock, Wiley E.,	Caribou

## CUMBERLAND COUNTY

## ACTIVE MEMBERS

Applin, Hilton H.,	129 Maine St., Brunswick
Aranson, Albert,	73 Deering St., Portland
Asali, Louis A.,	29 Deering St., Portland
Ashermann, Edward G.,	31 Deering St., Portland
Babalian, Leon,	38 Deering St., Portland
Barker, Nathaniel B. T.,	Yarmouth
Beach, S. Judd,	704 Congress St., Portland
Beck, Henry W.,	Gray
Bergmann, Jerome W.,	131 State St., Portland
Bettle, Ronald A.,	Brunswick
Bickmore, Harold V.,	723 Congress St., Portland
Bischoffberger, John M.,	Naples
Bishop, Lloyd W.,	188 State St., Portland
Blaisdell, Elton R.,	12 Deering St., Portland
Bramhall, Theodore C.,	704 Congress St., Portland
Branson, Sidney R.,	37 Main St., So. Windham
Broggi, Frank S.,	18 Neal St., Portland
Brown, Luther A.,	13 Deering St., Portland
Burbank, Bernerd H.,	275 Cottage Rd., So. Portland
Burns, Robert M.,	810 Main St., Westbrook
Burrage, William C.,	57 Deering St., Portland
Cappello, Joseph,	144 Spring St., Portland
Carmichael, Frank E.,	72 Deering St., Portland

Casey, William L.,	131 State St., Portland	Lorimer, Robert V.,	39 Deering St., Portland
Center, Ervin A.,	Steep Falls	Lothrop, Eaton S.,	690 Congress St., Portland
Christensen, Harry E.,	672 Ocean Ave., Portland	Love, Robert B.,	Gorham
Clarke, Chester L.,	10 Congress Sq., Portland	Lovely, David K.,	73 Deering St., Portland
Conneen, Lawrence W.,	131 State St., Portland	Macdonald, H. Eugene,	690 Congress St., Portland
Cragin, Charles L.,	831 Congress St., Portland	Maier, Paul,	723 Congress St., Portland
Cummings, George O.,	47 Deering St., Portland	Maltby, George L.,	203 State St., Portland
Curtis, Harry L.,	142 High St., Portland	Marshall, Donald F.,	142 High St., Portland
Daniels, Donald H.,	73 Deering St., Portland	Marston, Paul C.,	Kezar Falls
Darche, Albert A.,	782 Main St., Westbrook	Martin, Ralf S.,	58 Deering St., Portland
Davidson, David,	45 Deering St., Portland	Martin, Thomas A.,	203 State St., Portland
Davidson, Gisela K.,	45 Deering St., Portland	McAdams, William R.,	723 Congress St., Portland
Davies, Lloyd G.,	Fryeburg	McCann, Eugene C.,	704 Congress St., Portland
Davis, Harry E.,	169 State St., Portland	McCrum, Philip H.,	188 State St., Portland
Derry, George H., Jr.,	690 Congress St., Portland	McDermott, Leo J.,	151 Vaughan St., Portland
Dionne, Maurice J.,	36 Cumberland St., Brunswick	McFarland, Edward A.,	Brunswick
Dooley, Francis M.,	53 Deering St., Portland	McIntire, Barron F., Jr.,	Yarmouth
Dore, Kenneth E.,	Fryeburg	McLean, E. Allan,	29 Deering St., Portland
Dorsey, F. Donald,	52 Deering St., Portland	McManamy, Eugene P.,	39 Deering St., Portland
Douphinett, Otis J.,	763 Congress St., Portland	Melnick, Jacob,	333 Congress St., Portland
Drake, Emerson H.,	29 Deering St., Portland	Miller, Thor,	752 Main St., Westbrook
Drake, Eugene H.,	58 Deering St., Portland	Mills, Nathaniel,	Pownal State School, Pownal
Drummond, Joseph B.,	10 Ship Channel Rd., So. Portland	Monkhouse, William A.,	131 State St., Portland
Dunham, Carl E.,	201 State St., Portland	Moore, Roland B.,	201 State St., Portland
Dyhrberg, Norman E.,	331 Main St., Cumberland Mills	Morrison, Alvin A.,	57 Deering St., Portland
Everett, Harold J.,	308 Danforth St., Portland	Moulton, Albert W.,	180 State St., Portland
Fagone, Francis A.,	312 Congress St., Portland	Moulton, Albert W., Jr.,	180 State St., Portland
Ferguson, Franklin A.,	9 Deering St., Portland	O'Donnell, Eugene E.,	32 Deering St., Portland
Ferguson, Franklin F.,	22 Arsenal St., Portland	Ormandy, Laszlo,	22 Deering St., Portland
Files, Ernest W.,	201 State St., Portland	Ottum, Alvin E.,	31 Deering St., Portland
Finks, Henry B.,	73 Deering St., Portland	Parker, James M.,	31 Deering St., Portland
Fogg, C. Eugene,	794 Great Plain Ave., Needham, Mass.	Patterson, James,	614 Highland Ave., So. Portland
Foster, Albert D.,	Bay Shore Drive, Falmouth Foreside	Peaslee, C. Capen, Jr.,	339 Woodford St., Portland
Foster, Thomas A.,	131 State St., Portland	Penta, Walter E.,	316 Woodford St., Portland
Fox, S. Frank,	173 State St., Portland	Polisner, Saul R.,	188 State St., Portland
Freeman, William E.,	107 Main St., Yarmouth	Porter, Joseph E.,	22 Arsenal St., Portland
Geer, Charles R.,	690 Congress St., Portland	Richardson, C. Earle,	3 Cumberland St., Brunswick
Geer, George I., Jr.,	690 Congress St., Portland	Ridlon, Magnus G.,	Kezar Falls
Getchell, Ralph A.,	690 Congress St., Portland	Robinson, Carl M.,	31 Deering St., Portland
Geyerhahn, George,	47 Deering St., Portland	Rowe, Daniel M.,	306 Congress St., Portland
Glassmire, Charles R.,	58 Deering St., Portland	Santoro, Domenico A.,	756 Congress St., Portland
Goduti, Richard J.,	704 Congress St., Portland	Sapiro, Howard M.,	175 State St., Portland
Good, Philip G.,	38 Deering St., Portland	Sawyer, Samuel G.,	Cornish
Gordon, Charles H.,	46 Deering St., Portland	Schwartz, Carol,	38 Deering St., Portland
Gould, Arthur L.,	Freeport	Scolten, Adrian H.,	32 Deering St., Portland
Greco, Edward A.,	12 Pine St., Portland	Shanahan, William H.,	1231 Forest Ave., Portland
Hall, Earl S.,	696 Congress St., Portland	Smith, Frank A.,	343 Main St., Westbrook
Ham, Joseph G.,	690 Congress St., Portland	Smith, Kenneth E.,	73 Deering St., Portland
Hamel, John R.,	50 Deering St., Portland	Sowles, Horace K.,	131 State St., Portland
Hanley, Daniel F.,	Brunswick	Spencer, Jack,	31 Deering St., Portland
Hanlon, Francis W.,	46 Deering St., Portland	Stevens, Theodore M.,	32 Deering St., Portland
Hanson, Henry W., Jr.,	Cumberland Center	Stuart, Albert F.,	23 Noyes St., Portland
Haskell, Alfred W.,	142 High St., Portland	Sturgis, Karl B.,	Pownal State School, Pownal
Haskell, Harris B.,	9 Bramhall St., Portland	Tabachnick, Henry M.,	110 Park Ave., Portland
Hawkes, Richard S.,	47 Deering St., Portland	Thaxter, Langdon T.,	31 Deering St., Portland
Heifetz, Ralph	173 State St., Portland	Thompson, Philip P., Jr.,	704 Congress St., Portland
Hills, Louis L.,	816 Main St., Westbrook	Tobie, Walter E.,	3 Deering St., Portland
Holt, C. Lawrence,	29 Deering St., Portland	Tougas, Raymond A.,	Brunswick
Holt, William,	14 Deering St., Portland	Upham, Roscoe C.,	15 Crescent St., Biddeford
Huntress, Roderick L.,	10 Congress Sq., Portland	Ventimiglia, William A.,	22 Deering St., Portland
Ives, Howard R., Jr.,	31 Deering St., Portland	Ward, John V.,	131 State St., Portland
Jackson, Calvin F.,	State Rd., Falmouth Foreside	Webb, Harold R.,	Brunswick
Jamieson, James G. S.,	82 High St., Portland	Webber, Isaac M.,	29 Deering St., Portland
Johnson, Albert C.,	45 Deering St., Portland	Webber, M. Carroll,	735 Stevens Ave., Portland
Johnson, Henry P.,	32 Deering St., Portland	Webster, Fred P.,	101 Vaughan St., Portland
Johnson, Oscar R.,	18 Deering St., Portland	Weeks, DeForest,	158 Pleasant Ave., Portland
Konecki, John T.,	821 Washington Ave., Portland	Welch, Francis J.,	44 Deering St., Portland
Kupelian, Nessib S.,	Pownal State School, Pownal	Wellington, J. Foster,	655 Congress St., Portland
Lamb, Henry W.,	131 State St., Portland	Wescott, Clement P.,	Windham Hill
Lappin, John J.,	171 State St., Portland	Whitney, Harlan R.,	655 Congress St., Portland
Laughlin, K. Alexander,	201 State St., Portland	Whittier, Alice A. S.,	143 Neal St., Portland
Leighton, Adam P.,	192 State St., Portland	Wight, Donald G.,	30 Mitchell Rd., So. Portland
Leighton, Wilbur F.,	192 State St., Portland	Williams, Ralph E.,	Freeport
Lincoln, John R.,	22 Arsenal St., Portland	Woodman, Arthur B.,	Falmouth Foreside
Loewenstein, George,	Great Chebeague Island	Zolov, Benjamin,	296 Congress St., Portland
Logan, G. E. C.,	144 State St., Portland		
Lombard, Reginald T.,	793 Main St., So. Portland		



## HONORARY MEMBERS

Bradford, William H., 133 Coyle St., Portland  
 Brock, Henry H., Alfred  
 Emery, Harry S., 721 Stevens Ave., Portland  
 Howard, Harvey, Freeport  
 Robinson, Edward F., Falmouth  
 Stetson, Elbridge G. A., Brunswick  
 Tetreau, Thomas, 44 Monument Sq., Portland  
 Wheel, Frederick E., 773 Main St., Westbrook

## MEMBERS IN MILITARY SERVICE

Davis, Paul V., 4th St. Apts., Albany, Georgia  
 Thompson, Milton S., Brooke Gen. Hosp., Fort Sam Houston, Texas

## FRANKLIN COUNTY

## ACTIVE MEMBERS

Brinkman, Harry, 47 Perham St., Farmington  
 Brown, Elmer, Farmington  
 Brown, Irving E., Jr., Rangeley  
 Chase, Philip B., Farmington  
 Colley, Maynard B., Wilton  
 Eastman, Charles W., Livermore Falls  
 Floyd, Albion E., New Sharon  
 Floyd, Paul E., 2 Middle St., Farmington  
 Kyes, Preston, North Jay  
 Moulton, John H., Rangeley  
 Pratt, George L., Farmington  
 Reed, James W., Farmington  
 Thompson, Cecil F., Phillips  
 Weymouth, Currier C., Farmington  
 Zikel, Herbert M., Wilton

## HONORARY MEMBER

White, Verdeil O., (summer) North Jay  
 (winter) 24 Howard St., Springvale

## HANCOCK COUNTY

## ACTIVE MEMBERS

Babcock, Harold S., Castine  
 Bliss, Raymond V. N., Blue Hill  
 Burgess, Lyman C., Blue Hill  
 Cameron, Dwight, Northeast Harbor  
 Clarke, Raymond W., Ellsworth  
 Coffin, Ernest L., Northeast Harbor  
 Coffin, Silas A., Bar Harbor  
 Crowe, James H., Ellsworth  
 Delafield, Robert H., Ellsworth  
 Gray, Philip L., So. Brooksville  
 Knickerbocker, Charles H., Bar Harbor  
 Knowlton, Charles C., Ellsworth  
 Kopfmann, Harry, Deer Isle  
 Larrabee, Charles F., Bar Harbor  
 Millstein, Hyman, Southwest Harbor  
 Morrison, Charles C., Jr., Bar Harbor  
 O'Meara, Edward S., Ellsworth  
 Parcher, George, Ellsworth  
 Sumner, Charles M., West Sullivan  
 Thegan, W. Edward, Bucksport  
 Torrey, Marcus A., Ellsworth  
 Trowbridge, Mason, Jr., Ellsworth  
 Wagner, Samuel, Bucksport  
 Weymouth, Raymond E., Bar Harbor  
 Wilbur, Herbert T., Jr., Southwest Harbor

## HONORARY MEMBERS

Holt, Hiram A., Winter Harbor  
 Little, Clarence Cook, Bar Harbor

## KENNEBEC COUNTY

## ACTIVE MEMBERS

Abbott, Henry W., 116 Main St., Waterville  
 Bauman, Clair S., 177 Main St., Waterville  
 Bisson, Napoleon, 29 Common St., Waterville

Bourassa, Harvey J., 50 Main St., Waterville  
 Brann, Henry A., 31 Western Ave., Augusta  
 Breard, J. Alfred, 15 Summer St., Waterville  
 Bull, Frank B., 72 Church St., Gardiner  
 Carter, Frederick R., 43 Sylvan Rd., So. Portland  
 Cates, Samuel C., East Vassalboro  
 Chasse, Richard L., 173 Main St., Waterville  
 Cook, Aaron, 44 Main St., Waterville  
 Coombs, George A., 283 Water St., Augusta  
 Cyr, Gerald A., 50 Main St., Waterville  
 Dachslager, Philip, 269½ Water St., Augusta  
 Dennis, Richard H., 33 College Ave., Waterville  
 Dore, Clarence E., 88 Pleasant St., Waterville  
 Dunn, Robert H., Veterans' Adm., Togus  
 Elkins, Harry, State Hosp., Augusta  
 Emanuel, Meyer, Veterans' Adm., Togus  
 Ervin, Edmund N., 33 College Ave., Waterville  
 Farrell, Chalmers G., 2 Church St., Gardiner  
 Fay, Thomas F., 284 Water St., Augusta  
 Fisher, Dean H., State House, Augusta  
 Fisher, Samson, Oakland  
 Friedlander, Ernest O., Veterans' Adm., Togus  
 Giddings, Paul D., 31 Western Ave., Augusta  
 Giesen, Joseph H., Waterville  
 Gingras, Adolphe J., 99 Water St., Augusta  
 Gingras, Napoleon J., 105 Water St., Augusta  
 Goodrich, Blynn O., 165 Main St., Waterville  
 Gousse, William L., 76 Main St., Fairfield  
 Guite, L. Armand, 27 Main St., Waterville  
 Harlow, Edwin W., 177 Main St., Waterville  
 Herring, Leon D., Winthrop  
 Hill, Frederick T., 177 Main St., Waterville  
 Hill, Howard F., 177 Main St., Waterville  
 Hirschberger, Celia, 44 Main St., Waterville  
 Hurd, Allan C., 72 Church St., Gardiner  
 Jackson, Elmer H., 304 Water St., Augusta  
 Jump, Clarence E., Veterans' Adm., Augusta, Georgia  
 Kagan, Samuel H., 283 Water St., Augusta  
 Kenny, Clarence J., Veterans' Adm., Wadsworth, Kansas  
 Kirkham, Dunham, Veterans' Adm., Togus  
 Lambert, Greenleaf H., 326 San Ignacio Dr., El Monte, Calif.  
 Langer, Ella, State House, Augusta  
 Lepore, Anthony E., 72 Church St., Gardiner  
 Libby, Harold E., 265 Water St., Gardiner  
 Lubell, Moses F., 50 Roosevelt Ave., Waterville  
 Marquardt, Matthias, State Hosp., Augusta  
 Matthews, Hugh J., Jr., Gardiner  
 Mazzola, Stephen, Veterans' Adm., Dayton, Ohio  
 McKay, Roland L., 284 Water St., Augusta  
 McLaughlin, Clarence R., 345 Water St., Gardiner  
 McLaughlin, Ivan E., 345 Water St., Gardiner  
 McQuillan, Arthur H., 177 Main St., Waterville  
 McWethy, Wilson H., 31 Western Ave., Augusta  
 Merrill, Percy S., 82 Elm St., Waterville  
 Metzgar, John G., 175 Water St., Augusta  
 Michaud, Joseph H. C., 76 Main St., Waterville  
 Milliken, Howard A., Hallowell  
 Milliken, Howard H., 105 Second St., Hallowell  
 Mitchell, Roscoe L., 97 Water St., Hallowell  
 Moore, Arnold W., State Hosp., Augusta  
 Morrell, Arch H., State House, Augusta  
 Murphy, Norman B., 77 Winthrop St., Augusta  
 Nelson, John A., Veterans' Adm., Togus  
 Newcomb, Charles H., Clinton  
 Newman, Benjamin, 1204 Westwood Ave., Charleston, West Virginia  
 O'Connor, William J., 341 Water St., Augusta  
 Odiorne, Joseph E., Coopers Mills  
 Parizo, Harry L., 2 Silver St., Waterville  
 Piper, John O., 177 Main St., Waterville  
 Pomerleau, Ovide F., 177 Main St., Waterville  
 Pomerleau, Rodolphe J. F., 177 Main St., Waterville  
 Poulin, James E., 177 Main St., Waterville  
 Pratt, Loring W., Waterville  
 Priest, Maurice A., State House, Augusta  
 Provost, Helen C., 48 Green St., Augusta  
 Provost, Pierre E., 48 Green St., Augusta

Reynolds, John F.,  
Reynolds, Ralph L.,  
Risley, Edward H.,  
Robertson, George J.,  
Sanders, Stephen W.,  
Schmidt, Lorrimer M.,  
Sewall, Kenneth W.,  
Shelton, M. Tieche,  
Shippee, James N.,  
Simpson, Margaret R.,  
Sleeper, Francis H.,  
Small, Harold E.,  
Sommerfeld, Kurt A.,  
Southworth, John D.,  
Stubbs, Richard H.,  
Tashiro, Sabro,  
Towne, Charles E.,  
Towne, John G.,  
Trask, Burton W.,  
Tyson, Forrest C.,  
Valentine, John B.,  
Williams, Edmund P.,  
Wilson, Robert W.,  
Young, William J.,

101 Main St., Waterville  
101 Main St., Waterville  
27 College Ave., Waterville  
Central Maine San., Fairfield  
120 Main St., Winthrop  
Veterans' Adm., Togus  
173 Main St., Waterville  
284 Water St., Augusta  
122 Main St., Winthrop  
P. O. Box 275, Togus  
State Hosp., Augusta  
31 Grove St., Augusta  
6 Maine Ave., Gardiner  
Veterans' Adm., Togus  
133 State St., Augusta  
Veterans' Adm., Togus  
50 Main St., Waterville  
135 Main St., Waterville  
Murfreesboro, Tenn.  
R. F. D. 5, Augusta  
Veterans' Adm., Togus  
Oakland  
Veterans' Adm., Togus  
92 Wood St., Lewiston

HONORARY MEMBERS

Campbell, George R.,  
Cobb, William O.,  
Turner, Oliver W.,

14 Elm St., Augusta  
47 Brunswick Ave., Gardiner  
Boothbay Harbor

KNOX COUNTY  
ACTIVE MEMBERS

Allen, Robert L.,  
Apollonio, Howard L.,  
Brown, Freeman F.,  
Brown, Freeman F., Jr.,  
Campbell, Fred G.,  
Dennison, Frederick C.,  
Earle, Ralph P.,  
Frohock, Horatio W.,  
Green, Archibald F.,  
Jameson, C. Harold,  
Jones, Paul A.,  
Kibbe, Frank W.,  
Lawry, Oram R., Jr.,  
Mann, David V.,  
Miller, John F.,  
Millington, Paul A.,  
North, Charles D.,  
Platt, Anna,  
Soule, Gilmore W.,  
Toungue, Harry G.,  
Wasgatt, Wesley N.,  
Weisman, Herman J.,

37 Spring St., Rockland  
7 Talbot Ave., Rockland  
5 Beech St., Rockland  
13 Maple St., Rockland  
Warren  
Main St., Thomaston  
Vinalhaven  
10 Summer St., Rockland  
60 Elm St., Camden  
463 Main St., Rockland  
Union  
37 Spring St., Rockland  
27 Oak St., Rockland  
74 Elm St., Camden  
81 Park St., Rockland  
44 Mountain St., Camden  
38 Union St., Rockland  
Friendship  
463 Main St., Rockland  
12 Union St., Camden  
41 Talbot Ave., Rockland  
76 Limerock St., Rockland

HONORARY MEMBERS

Hall, Walter D.,  
Tweedie, Hedley V.,

407 Main St., Rockland  
76 No. Main St., Rockland

LINCOLN-SAGADAHOC COUNTY  
ACTIVE MEMBERS

Barrows, Harris C.,  
Belknap, Robert W.,  
Dash, George E.,  
Day, DeForest S.,  
Dougherty, John F.,  
Fuller, Edwin M., Jr.,  
Gregory, Philip O.,  
Hamilton, Virginia C.,  
Hawkins, Donald B.,  
Kershner, Warren E.,  
Morin, Harry F.,  
Nichols, Arthur A.,  
Parsons, Neil L.,

5 Oak St., Boothbay Harbor  
Damariscotta  
Boothbay Harbor  
Wiscasset  
112 Front St., Bath  
108 Front St., Bath  
Boothbay Harbor  
900 Washington St., Bath  
South Bristol  
119 Front St., Bath  
72 Front St., Bath  
Wiscasset  
Damariscotta

Pratt, Edwin F.,  
Proctor, Thomas E.,  
Smith, Jacob,  
Smith, Joseph I.,  
Stetson, Rufus E.,  
Stott, Ardenne A.,  
Sylvester, Philip H.,  
Wilson, Harry M.,  
Winchenbach, Francis A.,

14 Pleasant St., Richmond  
Boothbay Harbor  
118 Front St., Bath  
118 Front St., Bath  
Damariscotta  
117 Front St., Bath  
Bristol Rd., Damariscotta  
Middle St., Bath  
910 Washington St., Bath

MEMBER IN MILITARY SERVICE

Dalrymple, Sidney C.,

Georgetown

OXFORD COUNTY  
ACTIVE MEMBERS

Adams, Lester,  
Aucoin, Pierre B.,  
Boynton, Willard H.,  
Defoe, Garfield G.,  
Dixon, Walter G.,  
Elsmore, Dexter E.,  
Greene, John A.,  
Howard, Henry M.,  
Hubbard, Roswell E.,  
Kay, Edwin,  
Leslie, Frank E.,  
MacDougall, James A.,  
Matheson, John A.,  
McCarty, Eugene M.,  
McCormack, Roland L.,  
Moore, Beryl M.,  
Nangle, Thomas,  
Nelson, Chesley W.,  
Noyes, Harriett L.,  
Oestrich, Alfred,  
Pearson, Henry,  
Reeves, Edward L.,  
Reeves, Helen M.,  
Rowe, Linwood M.,  
Rowe, William T.,  
Royal, Albert P., Jr.,  
Stanwood, Harold W.,  
Stewart, Delbert M.,  
Tibbetts, Raymond R.,  
Villa, Joseph A.,

Western Maine San., Greenwood Mt.  
77 Rumford Ave., Rumford  
Bethel  
Dixfield  
16 Deering St., Norway  
Dixfield  
96 Congress St., Rumford  
105 Franklin St., Rumford  
Waterford  
31 Frye St., Lewiston  
Andover  
303 Penobscot St., Rumford  
Bethel  
82 Main Ave., Rumford  
245 Main St., Norway  
Oxford  
West Paris  
121 Main St., Norway  
114 Congress St., Rumford  
Rumford  
Brownfield  
38 Market Sq., So. Paris  
38 Market Sq., So. Paris  
250 Penobscot St., Rumford  
306 Congress St., Portland  
82 Main Ave., Rumford  
5 Franklin St., Rumford  
15 Main St., So. Paris  
Bethel  
17 Main St., So. Paris

MEMBERS IN MILITARY SERVICE

Corliss, Leland M.,  
Daniels, S. David,

35 So. Albion St., Denver, Colorado

PENOBSCOT COUNTY  
ACTIVE MEMBERS

Adams, Asa C.,  
Adams, Winford C.,  
Albro, Ward A.,  
Ames, Forrest B.,  
Anderson, Karl V.,  
Barrett, Robert J., Jr.,  
Blaisdell, Carl E.,  
Blaisdell, William B.,  
Bridges, Donald E.,  
Brown, Eugene E.,  
Brown, Lloyd,  
Burke, Paul W.,  
Butler, Harry,  
Butterfield, Wilfred I.,  
Clough, Dexter J., 2nd,  
Clough, Herbert T., Jr.,  
Comeau, Wilfred J.,  
Cornell, Robert C.,  
Coulton, Donald,  
Craig, D. Allan,  
Cutler, Lawrence M.,  
Devan, Thomas A.,

Main St., Orono  
185 No. Main St., Brewer  
326 State St., Bangor  
255 Hammond St., Bangor  
Pittsfield  
268 State St., Bangor  
42 Broadway, Bangor  
11 Ohio St., Bangor  
Winterport  
316 State St., Bangor  
316 State St., Bangor  
23 Main St., Newport  
77 Broadway, Bangor  
67 Main St., Lincoln  
224 State St., Bangor  
111 State St., Bangor  
1 Fern St., Bangor  
Shrine Hosp., Springfield, Mass.  
326 State St., Bangor  
41 E. 42nd St., New York 17, N. Y.  
31 Grove St., Bangor  
10245-47th Ave., Corona, L. I., N. Y.



Dunham, Rand A.,  
 Dwyer, Clement S.,  
 Emerson, W. Merritt,  
 Emery, Clarence, Jr.,  
 Feeley, J. Robert,  
 Fellows, Albert W.,  
 Gumprecht, Walter R.,  
 Hall, Walter L. H.,  
 Hammond, Walter J.,  
 Hedin, Carl J.,  
 Higgins, George I.,  
 Hill, Allison K.,  
 Houlihan, John S.,  
 Kellogg, Robert O.,  
 Knowlton, Henry C.,  
 Lezberg, Joseph,  
 Liebermann, Arthur R.,  
 Macdonald, Donald F.,  
 Maddan, Martin C.,  
 Mansfield, Blanche M.,  
 Manter, Wilbur B.,  
 Mason, Luther S.,  
 McNamara, Wesley C.,  
 McNeil, Harry D.,  
 McQuoid, Robert M.,  
 Merrill, Urban H.,  
 Miragliuolo, Leonard G.,  
 Morris, Lloyd E., Jr.,  
 Moulton, Manning C.,  
 Munce, Richard T.,  
 Osler, Jay K.,  
 Pearson, John J., Jr.,  
 Pressey, Harold E.,  
 Purinton, William A.,  
 Ridlon, Magnus F.,  
 Ruhlin, Carl W.,  
 Scribner, Herbert C.,  
 Sewall, Elmer M.,  
 Shapero, Benjamin L.,  
 Shubert, Alice J.,  
 Shubert, William M.,  
 Shurman, Hans,  
 Silsby, Samuel S.,  
 Skinner, Peter S.,  
 Smith, Hugh A.,  
 Smith, LeRoy H.,  
 Stebbins, Arthur P.,  
 Strout, Arthur C.,  
 Sullivan, John R.,  
 Taylor, Cornelius J.,  
 Taylor, Herbert L.,  
 Theriault, Louis L.,  
 Thompson, John B.,  
 Todd, Albert C.,  
 Vickers, Martyn A.,  
 Wadsworth, Richard C.,  
 Warren, Lyman O., Jr.,  
 Weatherbee, George B.,  
 Webber, Merlon A.,  
 Weisz, Hans,  
 Whitney, Byron V.,  
 White, William J.,  
 Whitworth, John E.,  
 Woodcock, Allan,  
 Wright, LaForest J.,  
 Young, Ernest T.,

East Millinocket  
 35 Maple St., Bangor  
 131 State St., Bangor  
 92 Essex St., Bangor  
 3 Third St., Bangor  
 52 Ohio St., Bangor  
 116 State St., Bangor  
 50 N. 4th St., Old Town  
 State Hosp., Bangor  
 301 State St., Bangor  
 Newport  
 113 Somerset St., Bangor  
 209 State St., Bangor  
 316 State St., Bangor  
 47 Broadway, Bangor  
 116 State St., Bangor  
 209 State St., Bangor  
 263 State St., Bangor  
 165 Center St., Old Town  
 297-14th St., Bangor  
 1 Fern St., Bangor  
 109 State St., Bangor  
 8 Lee St., Lincoln  
 58 Hamond St., Bangor  
 39 Columbia St., Bangor  
 15 Water St., Newport  
 130 Hammond St., Bangor  
 489 State St., Bangor  
 150 State St., Bangor  
 264 State St., Bangor  
 State and Grove Sts., Bangor  
 Old Town  
 23 Hammond St., Bangor  
 15 Ohio St., Bangor  
 99 Broadway, Bangor  
 205 French St., Bangor  
 259 Union St., Bangor  
 Orono  
 73 Broadway, Bangor  
 127 Leighton St., Bangor  
 127 Leighton St., Bangor  
 381 Main St., Dexter  
 11 Ohio St., Bangor  
 112 Ohio St., Bangor  
 489 State St., Bangor  
 Winterport  
 209 State St., Bangor  
 Dexter  
 59 Spruce St., Millinocket  
 16 State St., Bangor  
 Dexter  
 197 Center St., Old Town  
 9 Central St., Bangor  
 410 So. Main St., So. Brewer  
 268 State St., Bangor  
 489 State St., Bangor  
 156 No. Main St., Brewer  
 Hampden Highlands  
 Pittsfield  
 164 Main St., Lincoln  
 156 State St., Bangor  
 Howland  
 116 Hammond St., Bangor  
 35 Second St., Bangor  
 411 Union St., Bangor  
 Millinocket

## HONORARY MEMBERS

Lethiecq, J. Albert,  
 Purinton, Watson S.,  
 Small, Amos E.,  
 Weymouth, Frank D.,

115 Wilson St., Brewer  
 15 Ohio St., Bangor  
 31 Central St., Bangor  
 46 No. Main St., Brewer

## PISCATAQUIS COUNTY

## ACTIVE MEMBERS

Bradbury, Francis W.,  
 Bundy, Harvey C.,  
 Carde, Albert M.,  
 Curtis, John B.,  
 Dore, Guy E.,  
 Howard, George C.,  
 MacDougal, Wilbur E.,  
 Nickerson, Norman H.,  
 Pritham, Fred J.,  
 Pritham, Howard C.,  
 Stanhope, Charles N.,  
 Stitham, Linus J.,  
 Stuart, Ralph C.,

Dover-Foxcroft  
 Milo  
 33 Elm St., Milo  
 10 High St., Milo  
 Guilford  
 Guilford  
 Dover-Foxcroft  
 Greenville  
 Greenville Jct.  
 Greenville Jct.  
 Dover-Foxcroft  
 8 Main St., Dover-Foxcroft  
 Guilford

## HONORARY MEMBERS

Crosby, Nathaniel H.,  
 Merrill, Elmer D.,

Milo  
 Dover-Foxcroft

## SOMERSET COUNTY

## ACTIVE MEMBERS

Amrein, H. Carl,  
 Bernard, Albert J., Jr.,  
 Briggs, Paul R.,  
 Greenlaw, William A.,  
 Humphreys, Ernest D.,  
 Hutchins, Eugene L.,  
 Laney, Richard P.,  
 Lord, Edwin M.,  
 Lord, Maurice E.,  
 Marston, Henry E.,  
 Norris, Lester F.,  
 Philbrick, Maurice S.,  
 Reed, Howard L.,  
 Smith, Edgar J.,  
 Smith, Henry F.,  
 Strickland, Marion S.,  
 Sullivan, George E.,  
 Turner, Harland G.,  
 Young, George E.,

29 Weston Ave., Madison  
 198 Madison Ave., Skowhegan  
 Hartland  
 Fairfield  
 91 Main St., Pittsfield  
 No. New Portland  
 Skowhegan  
 220 Water St., Skowhegan  
 220 Water St., Skowhegan  
 No. Anson  
 36 Maple St., Madison  
 292 Water St., Skowhegan  
 Skowhegan  
 32 Lawrence St., Fairfield  
 Jackman Sta.  
 Canaan  
 Bingham  
 R. F. D. No. 2, Norridgewock  
 159 Water St., Skowhegan

## HONORARY MEMBERS

Milliken, Walter S.,  
 Stinchfield, Walter S.,  
 Walters, Wilson H.,

35 Maple St., Madison  
 Court St., Skowhegan  
 16 Summit St., Fairfield

## WALDO COUNTY

## ACTIVE MEMBERS

Caswell, John A.,  
 Hinckley, Harry F., Jr.,  
 Holmes, George W.,  
 Jones, Richard P.,  
 Read, Seth H.,  
 Small, Foster C.,  
 Stein, Ernest W.,  
 Stein, Abraham O.,  
 Stevens, Carl H.,  
 Tapley, Eugene D.,  
 Torrey, Raymond L.,

7 Cedar St., Belfast  
 Dark Harbor  
 Belfast  
 5 Franklin St., Belfast  
 15 Church St., Belfast  
 169 High St., Belfast  
 Stockton Springs  
 132 Main St., Belfast  
 1 Court St., Belfast  
 17 High St., Belfast  
 E. Main St., Searsport

## HONORARY MEMBER

Stevens, Eugene L.,

38 Church St., Belfast

## WASHINGTON COUNTY

## ACTIVE MEMBERS

Armstrong, Charles M.,  
 Bates, James C.,  
 Bennett, DaCosta F.,  
 Bosworth, Wesley F.,  
 Brownrigg, Leslie W.,  
 Buker, Richard S.,  
 Bunker, Willard H.,

Robbinston  
 Eastport  
 Lubec  
 17 Franklin St., Calais  
 St. Stephen, N. B.  
 48 Washington St., Eastport  
 Calais

## An Alphabetical List of the Members of the Maine Medical Association\*

B

Abbott, Henry W., 116 Main St., Waterville (6)  
 Adams, Asa C., Main St., Orono (10)  
 Adams, Lester, Western Maine San., Greenwood Mt. (9)  
 Adams, Winford C., 185 No. Main St., Brewer (10)  
 Albert, Armand, 193 Maine St., Van Buren (2)  
 Albert, Louis N., Van Buren (2)  
 Albert, Joseph L., Fort Kent (2)  
 Albro, Ward A., 326 State St., Bangor (10)  
 Allen, Robert L., 37 Spring St., Rockland (7)  
 Ames, Forrest B., 255 Hammond St., Bangor (10)  
 Amrein, H. Carl, 29 Weston Ave., Madison (12)  
 Anderson, Donald L., 54 Pine St., Lewiston (1)  
 Anderson, Karl V., Pittsfield (10)  
 Apollonio, Howard L., 7 Talbot Ave., Rockland (7)  
 Applin, Hilton H., 129 Maine St., Brunswick (3)  
 Aranson, Albert, 73 Deering St., Portland (3)  
 Archambault, Philip L., 75 Mill St., Auburn (1)  
 Armstrong, Charles M., Robbinston (14)  
 Asali, Louis A., 29 Deering St., Portland (3)  
 Ascher, David S., Patten (2)  
 Asherman, Edward G., 31 Deering St., Portland (3)  
 Aucoin, Pierre B., 77 Rumford Ave., Rumford (9)  
 Babalian, Leon, 38 Deering St., Portland (3)  
 Babcock, Harold S., Castine (5)  
 Bacon, Melvin, 150 Main St., Sanford (15)  
 Bancroft, George R., Jr., Kennebunkport (15)  
 Barden, Frank W., Saco-Lowell Shops, Biddeford (15)  
 Barker, Nathaniel B. T., Yarmouth (3)  
 Barrett, Robert J., Jr., 268 State St., Bangor (10)  
 Barrows, Harris C., 5 Oak St., Boothbay Harbor (8)  
 Bates, James C., Eastport (14)  
 Bauman, Clair S., 177 Main St., Waterville (6)  
 Beach, S. Judd, 704 Congress St., Portland (3)  
 Beck, Henry W., Gray (3)  
 Beeaker, Vincent H., 85 Wood St., Lewiston (1)  
 Beliveau, Bertrand A., 100 Pine St., Lewiston (1)  
 Beliveau, Romeo A., 89 Pine St., Lewiston (1)  
 Belknap, Robert W., Damariscotta (8)  
 Belmont, Ralph S., Washington St., Sanford (15)  
 Bennett, DaCosta F., Lubec (14)  
 Bergmann, Jerome W., 131 State St., Portland (3)  
 Bernard, Albert J., 198 Madison Ave., Skowhegan (12)  
 Bernard, Romeo E., 26 Beacon St., Lewiston (1)



Berrie, Lloyd H., Caribou (2)  
 Bettie, Ronald A., Brunswick (3)  
 Blackmore, Harold V., 723 Congress St., Portland (3)  
 Bishoffberger, John M., Naples (3)  
 Bishop, Lloyd W., 188 State St., Portland (3)  
 Bisson, Napoleon, 29 Common St., Waterville (6)  
 Blaisdell, Carl E., 42 Broadway, Bangor (10)  
 Blaisdell, Elton R., 12 Deering St., Portland (3)  
 Blaisdell, William B., 11 Ohio St., Bangor (10)  
 Bliss, Raymond V. N., Blue Hill (5)  
 Boone, Storer W., Presque Isle (2)  
 Bosworth, Wesley F., 17 Franklin St., Calais (14)  
 Bourassa, Harvey J., 50 Main St., Waterville (6)  
 Bousquet, Jean J., 91 Bartlett St., Lewiston (1)  
 Boynton, Willard H., Bethel (9)  
 Bradbury, Francis W., Dover-Foxcroft (11)  
 Bradford, William H., 133 Coyle St., Portland (3)  
 Bramhall, Theodore C., 704 Congress St., Portland (3)  
 Brann, Henry A., 31 Western Ave., Augusta (6)  
 Branson, Sidney R., 37 Main St., So. Windham (3)  
 Breard, J. Alfred, 15 Summer St., Waterville (6)  
 Bridges, Donald E., Winterport (10)  
 Briggs, Paul R., Hartland (12)  
 Brien, Maurice, 80 Pine St., Lewiston (1)  
 Brinkham, Harry, 47 Perham St., Farmington (4)  
 Brock, Henry H., Alfred (3)  
 Broggi, Frank S., 18 Neal St., Portland (3)  
 Brooks, Glidden L., 1740 Bainbridge St., Philadelphia (46)  
 Pa. (1)  
 Brown, Elmer, Farmington (4)  
 Brown, Eugene E., 316 State St., Bangor (10)  
 Brown, Freeman F., 5 Beech St., Rockland (7)  
 Brown, Freeman F., Jr., 13 Maple St., Rockland (7)  
 Brown, Irving E., Jr., Rangeley (4)  
 Brown, Lloyd, 316 State St., Bangor (10)  
 Brown, Luther A., 13 Deering St., Portland (3)  
 Brown, Stephen S., Mars Hill (2)  
 Brownrigg, Leslie W., St. Stephen, N.B. (14)  
 Buker, Edson B., 80 Goff St., Auburn (1)  
 Buker, Richard S., 48 Washington St., Eastport (14)  
 Bull, Frank B., 72 Church St., Gardiner (6)  
 Bundy, Harvey C., Milo (11)  
 Bunker, Willard H., Calais (14)  
 Burbank, Bernard H., 275 Cottage Rd., So. Portland (3)  
 Burgess, Lyman C., Blue Hill (5)  
 Burke, Paul W., 23 Main St., Newport (10)  
 Burns, Robert M., 810 Main St., Westbrook (3)  
 Burr, Charles G., Houlton (2)  
 Burrage, William C., 57 Deering St., Portland (3)  
 Busch, John J., 105 Elm St., Mechanic Falls (1)  
 Butler, Harry, 77 Broadway, Bangor (10)  
 Butterfield, Wilfred L., 67 Main St., Lincoln (10)

## C

Call, Ernest V., 118 Pine St., Lewiston (1)  
 Cameron, Dwight, Northeast Harbor (5)  
 Campbell, Fred G., Warren (7)  
 Campbell, George R., 14 Elm St., Augusta (6)  
 Capron, Charles W., Jr., 22 Barker St., Calais (14)  
 Cappello, Joseph, 144 Spring St., Portland (3)  
 Carde, Albert M., 33 Elm St., Milo (11)  
 Carmichael, Frank E., 72 Deering St., Portland (3)  
 Caron, Frederic J., 174 Bates St., Lewiston (1)  
 Carter, Frederick R., 43 Sylvan Rd., So. Portland (6)  
 Carter, Loren F., Northern Maine San., Presque Isle (2)  
 Cartland, John E., 117 Goff St., Auburn (1)  
 Casey, William L., 131 State St., Portland (3)  
 Caswell, John A., 7 Cedar St., Belfast (13)  
 Cates, Samuel C., East Vassalboro (6)  
 Cattley, Amy L., 477 Main St., Lewiston (1)  
 Center, Ervin A., Steep Falls (3)  
 Chapin, Milan A., 237 Turner St., Auburn (1)  
 Charest, Leandre R., 260 Main St., Biddeford (15)  
 Chase, Philip B., Farmington (4)  
 Chasse, Richard L., 173 Main St., Waterville (6)  
 Chenery, Frederick L., Jr., Monmouth (1)  
 Chevallier, Paul R., 240 Lisbon St., Lewiston (1)

Christensen, Harry E., 672 Ocean Ave., Portland (3)  
 Clapp, Waldo A., 215 College St., Lewiston (1)  
 Clapperton, Gilbert, 20 Ware St., Lewiston (1)  
 Clarke, Chester L., 10 Congress Sq., Portland (3)  
 Clarke, Raymond W., Ellsworth (5)  
 Clough, Dexter J., 2nd., 224 State St., Bangor (10)  
 Clough, Herbert T., Jr., 111 State St., Bangor (10)  
 Cobb, Norman E., Calais (14)  
 Cobb, Stephen A., 28 Winter St., Sanford (15)  
 Cobb, William O., 47 Brunswick Ave., Gardiner (6)  
 Coffin, Ernest L., Northeast Harbor (5)  
 Coffin, Silas A., Bar Harbor (5)  
 Colley, Maynard B., Wilton (4)  
 Colquhoun, Graham F., Eastport (14)  
 Comeau, Wilfred J., 1 Fern St., Bangor (10)  
 Conneen Lawrence W., 131 State St., Portland (3)  
 Cook, Aaron, 44 Main St., Waterville (6)  
 Coombs, George A., 283 Water St., Augusta (6)  
 Corbett, William F., 229 Main St., Sanford (15)  
 Corliss, Leland M., 35 So. Albion St., Denver, Colo. (9)  
 Cornell, Robert C., Shrine Hosp., Springfield, Mass. (10)  
 Coulton, Donald, 326 State St., Bangor (10)  
 Cox, William V., 133 Court St., Auburn (1)  
 Cragin, Charles L., 831 Congress St., Portland (3)  
 Craig, D. Allan, 41 E. 42nd St., New York 17, N.Y. (10)  
 Crane, James W., Woodland (14)  
 Crowe, James H., 121 Main St., Ellsworth (5)  
 Crosby, Nathaniel H., Milo (11)  
 Cummings, George O., 47 Deering St., Portland (3)  
 Cuneo, Kenneth J., Kennebunk (15)  
 Curtis, Harry L., 142 High St., Portland (3)  
 Curtis, John B., 10 High St., Milo (11)  
 Cutler, Lawrence M., 31 Grove St., Bangor (10)  
 Cyr, Gerald R., 50 Main St., Waterville (6)

## D

Dachslager, Phillip, 269½ Water St., Augusta (6)  
 Dalrymple, Sidney C., Georgetown (8)  
 Damon, Albert H., Limestone (2)  
 Daniels, Donald H., 73 Deering St., Portland (3)  
 Daniels, S. David, (Address not known) (9)  
 Darche, Albert A., 782 Main St., Westbrook (3)  
 Dash, George E., Boothbay Harbor (8)  
 Davidson, David, 45 Deering St., Portland (3)  
 Davidson, Gisela K., 45 Deering St., Portland (3)  
 Davies, Lloyd G., Fryeburg (3)  
 Davis, Harry E., 169 State St., Portland (3)  
 Davis, Paul V., 4th St. Apts., Albany, Ga. (3)  
 Day, DeForest S., Wiscasset (8)  
 DeFoe, Garfield G., Dixfield (9)  
 Delafield, Robert H., Ellsworth (5)  
 Dennett, Carl G., Saco (15)  
 Dennis, Richard H., Waterville (6)  
 Dennison, Frederick C., Main St., Thomaston (7)  
 Derry, George H., 690 Congress St., Portland (3)  
 Devan, Thomas A., 10245-47th Ave., Corona, L.I., N.Y. (10)  
 Dionne, Maurice J., 36 Cumberland St., Brunswick (3)  
 Dionne, William E., 21 Main St., Springvale (15)  
 Dixon, Walter G., 16 Deering St., Norway (9)  
 Doble, Eugene H., 6 Church St., Presque Isle (2)  
 Donahue, Clement L., 22 Main St., Caribou (2)  
 Donahue, Gerald H., Presque Isle (2)  
 Donovan, Joseph A., Houlton (2)  
 Dooley, Francis M., 53 Deering St., Portland (3)  
 Dore, Clarence E., 88 Pleasant St., Waterville (6)  
 Dore, Guy E., Guilford (11)  
 Dore, Kenneth E., Fryeburg (3)  
 Dorsey, F. Donald, 52 Deering St., Portland (3)  
 Dougherty, John F., 112 Front St., Bath (8)  
 Doughtinett, Otis J., 763 Congress St., Portland (3)  
 Downing, J. Robert, 37 Storer St., Kennebunk (15)  
 Drake, Emerson H., 29 Deering St., Portland (3)  
 Drake, Eugene H., 58 Deering St., Portland (3)  
 Drummond, Joseph B., 10 Ship Channel Rd., So. Portland (3)  
 DuMais, Alcide F., 125 College St., Lewiston (1)  
 Dunham, Carl E., 201 State St., Portland (3)

Dunham, Rand A., East Millinocket (10)  
 Dunn, Robert H., Veterans Adm., Togus (6)  
 Dwyer, Clement S., 35 Maple St., Bangor (10)  
 Dyhrberg, Norman E., 331 Main St., Cumberland Mills (3)

## E

Earle, Ralph P., Vinalhaven (7)  
 Eastman, Charles W., Livermore Falls (4)  
 Ebbett, Penry L. B., Houlton (2)  
 Elkins, Harry, State Hosp., Augusta (6)  
 Elsemore, Dexter E., Dixfield (9)  
 Emmanuel, Meyer, Veterans Adm., Togus (6)  
 Emerson, W. Merritt, 131 State St., Bangor (10)  
 Emery, Clarence, Jr., 92 Essex St., Bangor (10)  
 Emery, Harry S., 721 Stevens Ave., Portland (3)  
 Eppinger, Ernest, West Buxton (15)  
 Ervin, Edmund N., 33 College Ave., Waterville (6)  
 Everett, Harold J., 308 Danforth St., Portland (3)

## F

Fagone, Francis A., 312 Congress St., Portland (3)  
 Fahey, William J., 17 Frye St., Lewiston (1)  
 Farrell, Chalmers G., 2 Church St., Gardiner (6)  
 Faucher, Francois J., Grand Isle (2)  
 Fay, Thomas F., 284 Water St., Augusta (6)  
 Feeley, J. Robert, 3 Third St., Bangor (10)  
 Fellows, Albert W., 52 Ohio St., Bangor (10)  
 Ferguson, Franklin A., 9 Deering St., Portland (3)  
 Ferguson, Franklin F., 22 Arsenal St., Portland (3)  
 Files, Ernest W., 201 State St., Portland (3)  
 Finks, Henry B., 73 Deering St., Portland (3)  
 Fisher, Dean H., State House, Augusta (6)  
 Fisher, Samson, Oakland (6)  
 Flanders, Merton N., 344 Main St., Lewiston (1)  
 Floyd, Albion E., New Sharon (4)  
 Floyd, Paul E., 2 Middle St., Farmington (4)  
 Fogg, C. Eugene, 794 Great Plain Ave. Needham, Mass. (3)  
 Fortier, Paul J. B., 70 Pine St., Lewiston (1)  
 Foster, Albert D., Bay Shore Drive, Falmouth Foreside (3)  
 Foster, Thomas A., 131 State St., Portland (3)  
 Fox, S. Frank, 173 State St., Portland (3)  
 Freeman, William E., 107 Main St., Yarmouth (3)  
 Friedlander, Ernest O., Veterans Adm., Togus (6)  
 Frohoek, Horatio W., 10 Summer St., Rockland (7)  
 Frost, Robert A., 2 Goff St., Auburn (1)  
 Fuller, Edwin M., Jr., 108 Front St., Bath (8)

## G

Gagnon, Bernard H., Houlton (2)  
 Gauvreau, Horace L., 82 Pine St., Lewiston (1)  
 Geer, Charles R., 690 Congress St., Portland (3)  
 Geer, George I., Jr., 690 Congress St., Portland (3)  
 Getchell, Ralph A., 690 Congress St., Portland (3)  
 Geyerhahn, George, 47 Deering St., Portland (3)  
 Giddings, Paul D., 31 Western Ave., Augusta (6)  
 Giesen, Joseph H., Waterville (6)  
 Giguere, Eustache N., 108 Cedar St., Lewiston (1)  
 Gilbert, Walter J., Calais, (14)  
 Gingras, Adolphe J., 99 Water St., Augusta (6)  
 Gingras, Napoleon J., 105 Water St., Augusta (6)  
 Glassmire, Charles R., 58 Deering St., Portland (3)  
 Goduti, Richard J., 704 Congress St., Portland (3)  
 Goldman, Morris E., 487 Main St., Lewiston (1)  
 Good, Philip G., 38 Deering St., Portland (3)  
 Goodof, Irving I., 300 Main St., Lewiston (1)  
 Goodrich, Blynn O., 165 Main St., Waterville (6)  
 Goodwin, Ralph A., 56 Dennison St., Auburn (1)  
 Gordon, Charles H., 46 Deering St., Portland (3)  
 Gormley, Eugene G., Houlton (2)  
 Gottlieb, Julius, 210 College St., Lewiston (1)  
 Gould, Arthur L., Freeport (3)  
 Gould, George L., 76 Main St., Richmond, (15)

Gousse, William L., 76 Main St., Fairfield (6)  
 Grant, Alton L., Jr., 133 Court St., Auburn (1)  
 Gray, Philip L., So. Brooksville (5)  
 Greco, Edward A., 12 Pine St., Portland (3)  
 Green, Archibald F., 60 Elm St., Camden (7)  
 Greene, John A., 96 Congress St., Rumford (9)  
 Greene, Merrill S. F., 466 Main St., Lewiston (1)  
 Greenlaw, William A., Fairfield (12)  
 Gregory, Frederick L., 16 High St., Caribou (2)  
 Gregory, Philip O., Boothbay Harbor (8)  
 Griffiths, Eugene B., Presque Isle (2)  
 Gross, Leroy C., 19 Goff St., Auburn (1)  
 Grow, William B., Presque Isle (2)  
 Guite, L. Armand, 27 Main St., Waterville (6)  
 Gumprecht, Walter R., 116 State St., Bangor (10)

## H

Haas, Carl M., 31 Adam St., Biddeford (15)  
 Haas, Rudolph, 488 Main St., Lewiston (1)  
 Hall, Earl S., 696 Congress St., Portland (3)  
 Hall, Walter D., 407 Main St., Rockland (7)  
 Hall, Walter L. H., 50 N. 4th St., Old Town (10)  
 Ham, Joseph G., 690 Congress St., Portland (3)  
 Hamel, John R., 50 Deering St., Portland (3)  
 Hamilton, Virginia C., 900 Washington St., Bath (8)  
 Hammond, Walter J., State Hosp., Bangor (10)  
 Hanley, Daniel F., Brunswick (3)  
 Hanlon, Francis W., 46 Deering St., Portland (3)  
 Hanson, Henry W., Jr., Cumberland Centre (3)  
 Hanson, John F., Machias (14)  
 Harkins, Michael, J., 437 Main St., Lewiston (1)  
 Harlow, Edwin, W., 177 Main St., Waterville (6)  
 Harvey, Thomas G., 164 Main St., Ft. Fairfield (2)  
 Haskell, Alfred W., 142 High St., Portland (3)  
 Haskell, Harris B., 9 Bramhall St., Portland (3)  
 Hawkes, Richard S., 47 Deering St., Portland (3)  
 Hawkins, Donald B., So. Bristol (8)  
 Hayden, Louis B., Livermore Falls (1)  
 Head, Owen B., 6 Washington St., Sanford (15)  
 Hedin, Carl J., 301 State St., Bangor (10)  
 Heifetz, Ralph A., 173 State St., Portland (3)  
 Herring, Leon D., Winthrop (6)  
 Higgins, Everett C., 149 College St., Lewiston (1)  
 Higgins, George I., Newport (10)  
 Hill, Allison K., 113 Somerset St., Bangor (10)  
 Hill, Frederiek T., 177 Main St., Waterville (6)  
 Hill, Howard F., 177 Main St., Waterville (6)  
 Hill, Paul S., Jr., 176 Main St., Saco (15)  
 Hills, Louis L., 816 Main St., Westbrook (3)  
 Hinckley, Harry F., Jr., Dark Harbor (13)  
 Hirschberger, Celia, 44 Main St., Waterville (6)  
 Hirshler, Max, 85 Pine St., Lewiston (1)  
 Hogan, Chester F., Houlton (2)  
 Holland, Edward W., 28 Winter St., Sanford (15)  
 Holmes, George W., Belfast (13)  
 Holt, C. Lawrence, 29 Deering St., Portland (3)  
 Holt, Hiram A., Winter Harbor (5)  
 Holt, William, 14 Deering St., Portland (3)  
 Houlihan, John S., 209 State St., Bangor (10)  
 Howard, George C., Guilford (11)  
 Howard, Harvey, Freeport (3)  
 Howard, Henry M., 105 Franklin St., Rumford (9)  
 Hubbard, Roswell E., Waterford (9)  
 Huggard, Leslie H., Limestone (2)  
 Humphreys, Ernest D., 91 Main St., Pittsfield (12)  
 Huntress, Roderick L., 10 Congress Sq., Portland (3)  
 Hurd, Allan C., 72 Church St., Gardiner (6)  
 Hutchins, Eugene L., No. New Portland (12)

## I

Ives, Howard R., Jr., 31 Deering St., Portland (3)



## J

Jackson, Calvin F., State Rd., Falmouth Foreside (3)  
 Jackson, Elmer H., 304 Water St., Augusta (6)  
 Jacob, Donald R., Princeton (14)  
 James, Chakmakis, 47 Howe St., Lewiston (1)  
 Jameson, C. Harold, 463 Main St., Rockland (7)  
 Jamieson, James G., 82 High St., Portland (3)  
 Johnson, Albert C., 45 Deering St., Portland (3)  
 Johnson, Gordon N., Houlton (2)  
 Johnson, Henry P., 32 Deering St., Portland (3)  
 Johnson, Oscar R., 18 Deering St., Portland (3)  
 Jones, Paul A., Union (7)  
 Jones, Richard P., 5 Franklin St., Belfast (13)  
 Jump, Clarence E., Veterans Adm., Augusta, Ga. (6)

## K

Kagan, Samuel H., 283 Water St., Augusta (6)  
 Kalloch, Herbert F., Ft. Fairfield (2)  
 Kay, Edwin, 31 Frye St., Lewiston (9)  
 Kazutow, John, Machias (14)  
 Kellogg, Robert O., 316 State St., Bangor (10)  
 Kendall, Clarence F., 68 Birch St., Biddeford (15)  
 Kenney, Clarence J., Veterans Adm., Wadsworth, Kansas (6)  
 Kershner, Warren E., 119 Front St., Bath (8)  
 Kibbe, Frank W., 37 Spring St., Rockland (7)  
 Kimball, Herrick C., Ft. Fairfield (2)  
 Kinghorn, Charles W., Kittery (15)  
 Kirk, William V., Eagle Lake (2)  
 Kirkham, Dunham, Veterans Adm., Togus (6)  
 Knickerbocker, Charles H., Bar Harbor (5)  
 Knowlton, Charles C., Ellsworth (5)  
 Knowlton, Henry C., 47 Broadway, Bangor (10)  
 Konecki, John T., 821 Washington Ave., Portland (3)  
 Kopfmann, Harry, Deer Isle (5)  
 Kupelian, Nessib S., State School, Pownal (3)  
 Kyes, Preston, No. Jay (4)

## L

Labbe, Onil B., Van Buren (2)  
 LaFond, Robert S., Masonic Block, Saco (15)  
 Lamb, Henry W., 131 State St., Portland (3)  
 Lambert, Greenlief H., 326 San Ignacio Dr., El Monte, Calif. (6)  
 Laney, Richard P., Skowhegan (12)  
 Langer, Ella, State House, Augusta (6)  
 LaPorte, Paul C., Edmundston, N.B., (2)  
 Lappin, John J., 171 State St., Portland (3)  
 LaRochelle, Joseph R., 42 Bacon St., Biddeford (15)  
 Larrabee, Charles F., Bar Harbor (5)  
 Larrabee, Fay F., Washburn (2)  
 Laron, Karl V., East Machias (14)  
 Larson, Oscar F., Machias (14)  
 Laughlin, K. Alexander, 201 State St., Portland (3)  
 Lawry, Oram R., Jr., 27 Oak St., Rockland (7)  
 Leighton, Adam P., 192 State St., Portland (3)  
 Leighton, Wilbur F., 192 State St., Portland (3)  
 Lengyel, Charles, Biddeford (15)  
 Lepore, Anthony E., 72 Church St., Gardiner (6)  
 Leslie, Frank E., Andover (9)  
 Lethiecq, J. Albert, 115 Wilson St., Brewer (10)  
 Levesque, Romeo J., Frenchville (2)  
 Lezberg, Joseph, 116 State St., Bangor (10)  
 Libby, Harold E., 265 Water St., Gardiner (6)  
 Liebermann, Arthur R., 209 State St., Bangor (10)  
 Lightle, William E., No. Berwick (15)  
 Lincoln, John R., 22 Arsenal St., Portland (3)  
 Lincourt, Armand L., 47 Allen St., Sanford (15)  
 Loewenstein, George, Great Chebeague Island (3)  
 Logan, G. E. C., 144 State St., Portland (3)  
 Lombard, Reginald T., 793 Main St., So. Portland (3)

Lord, Edwin M., 220 Water St., Skowhegan (12)  
 Lord, Maurice E., 220 Water St., Skowhegan (12)  
 Lorimer, Robert V., 39 Deering St., Portland (3)  
 Lothrop, Eaton S., 690 Congress St., Portland (3)  
 Love, Robert B., Gorham (3)  
 Lovely, David K., 73 Deering St., Portland (3)  
 Lubell, Moses F., 50 Roosevelt Ave., Waterville (6)  
 Lynn, Geraldine, 74 Pierce St., Lewiston (1)

## M

MacBride, Robert G., 3 School St., Lubec (14)  
 Macdonald, Donald F., 263 State St., Bangor (10)  
 MacDonald, H. Eugene, 690 Congress St., Portland (3)  
 MacDonald, James H., 103 Main St., Kennebunk (15)  
 MacDougall, James A., 303 Penobscot St., Rumford (9)  
 MacDougall, Wilbur E., Dover-Foxcroft (11)  
 Madden, Martin C., 165 Center St., Old Town (10)  
 Madigan, John B., Houlton (2)  
 Magosci, Alexander W., York Village (15)  
 Mahaney, William F., 338 Main St., Saco (15)  
 Maier, Paul, 723 Congress St., Portland (3)  
 Maltby, George L., 203 State St., Portland (3)  
 Mandelstam, Abe W., 17 Wakefield St., Lewiston (1)  
 Mann, David V., 74 Elm St., Camden (7)  
 Mansfield, Blanche M., 297-14th St., Bangor (10)  
 Manter, Wilbur B., 1 Fern St., Bangor (10)  
 Marquardt, Matthias, State Hosp., Augusta (6)  
 Marshall, Donald F., 142 High St., Portland (3)  
 Marston, Henry E., No. Anson (12)  
 Marston, Paul C., Kezar Falls (3)  
 Martel, Dominique A., 460 Sabattus St., Lewiston (1)  
 Martin, Ralf S., 58 Deering St., Portland (3)  
 Martin, Thomas A., 203 State St., Portland (3)  
 Mason, Luther S., 109 State St., Bangor (10)  
 Matheson, John A., Bethel (9)  
 Matthews, Hugh J., Jr., Gardiner (6)  
 Mazzacane, Walter D., Old Orchard (15)  
 Mazzola, Stephen, Veterans Adm., Dayton, Ohio (6)  
 Melnick, Jacob, 333 Congress St., Portland (3)  
 Merrick, John R., 17 So. Main St., Caribou (2)  
 Merrill, Elmer D., Dover-Foxcroft (11)  
 Merrill, Percy S., 82 Elm St., Waterville (6)  
 Merrill, Urban H., 15 Water St., Newport (10)  
 Metcalf, John T., Calais (14)  
 Methot, Frank P., 256 Lisbon St., Lewiston (1)  
 Metzgar, John G., 175 Water St., Augusta (6)  
 Michaud, Joseph H. C., 76 Main St., Waterville (6)  
 Miller, Clark F., 300 Main St., Lewiston (1)  
 Miller, Hudson R., 11 Turner St., Auburn (1)  
 Miller, John F., 81 Park St., Rockland (7)  
 Miller, Thor, 752 Main St., Westbrook (3)  
 Milliken, Howard A., Hallowell (6)  
 Milliken, Howard H., 105 Second St., Hallowell (6)  
 Milliken, Walter S., 35 Maple St., Madison (12)  
 Millington, Paul A., 44 Mountain St., Camden (7)  
 Mills, Nathaniel, State School, Pownal (3)  
 Millstein, Hyman, Southwest Harbor (5)  
 Miragliuolo, Leonard G., 130 Hammond St., Bangor (10)  
 Mitchell, Hazen C., Calais (14)  
 Mitchell, Roscoe L., 97 Water St., Hallowell (6)  
 Monkhouse, William A., 131 State St., Portland (3)  
 Moore, Arnold W., State Hosp., Augusta (6)  
 Moore, Beryl M., Oxford (9)  
 Moore, Roland B., 201 State St., Portland (3)  
 Moore, Valentine J., 300 Main St., Lewiston (1)  
 Morin, Harry F., 72 Front St., Bath (8)  
 Morrell, Arch H., State House, Augusta (6)  
 Morris, Lloyd E., Jr., 489 State St., Bangor (10)  
 Morrison, Alvin A., 57 Deering St., Portland (3)  
 Morrison, Charles C., Jr., Bar Harbor (5)  
 Morse, Waldron L., 11½ Main St., Springvale (15)  
 Moulton, Albert W., 180 State St., Portland (3)  
 Moulton, Albert W., Jr., 180 State St., Portland (3)

Moulton, John H., Rangeley (4)  
 Moulton, Manning, C., 150 State St., Bangor (10)  
 Moulton, Marion A.K., West Newfield (15)  
 Munce, Richard T., 264 State St., Bangor (10)  
 Mundle, Perley J., Calais (14)  
 Murphy, John J., So. Berwick (15)  
 Murphy, Norman B., 77 Winthrop St., Augusta (6)  
 Myer, John C., 2 School St., Sanford (15)

## Mc

McAdams, William R., 723 Congress St., Portland (3)  
 McCann, Eugene C., 704 Congress St., Portland (3)  
 McCarty, Eugene M., 82 Maine Ave., Rumford (9)  
 McCormack, Roland L., 245 Main St., Norway (9)  
 McCrum, Philip H., 188 State St., Portland (3)  
 McDermott, Leo J., 151 Vaughan St., Portland (3)  
 McFarland, Edward A., Brunswick (3)  
 McIntire, Barron F., Jr., Yarmouth (3)  
 McKay, Roland L., 284 Water St., Augusta (6)  
 McLaughlin, Clarence R., 345 Water St., Gardiner (6)  
 McLaughlin, Ivan E., 345 Water St., Gardiner (6)  
 McLean, E. Allan, 29 Deering St., Portland (3)  
 McManamy, Eugene P., 39 Deering St., Portland (3)  
 McNamara, Wesley C., 8 Lee St., Lincoln (10)  
 McNeil, Harry D., 58 Hammond St., Bangor (10)  
 McQuillan, Arthur H., 177 Main St., Waterville (6)  
 McQuoid, Robert M., 39 Columbia St., Bangor (10)  
 McWethy, Wilson H., 31 Western Ave., Augusta (6)

## N

Nadeau, J. Paul, 91 Pine St., Lewiston (1)  
 Nangle, Thomas P., West Paris (9)  
 Nelson, Chesley W., 121 Main St., Norway (9)  
 Nelson, John A., Veterans Adm., Togus (6)  
 Nemon, Leon, 243 State St., Portland (15)  
 Newcomb, Charles H., Clinton (6)  
 Newman, Benjamin, 1204 Westwood Ave., Charleston, W. Va. (6)  
 Nichols, Arthur A., Wiscasset (8)  
 Nickerson, Norman H., Greenville (11)  
 Norris, Lester F., 36 Maple St., Madison (12)  
 North, Charles D., 38 Union St., Rockland (7)  
 Noyes, Harriett L., 114 Congress St., Rumford (9)

## O

O'Connell, George B., 11 Lisbon St., Lewiston (1)  
 O'Connor, William J., 341 Water St., Augusta (6)  
 Odiorne, Joseph E., Cooper's Mills (6)  
 O'Donnell, Eugene., 32 Deering St., Portland (3)  
 Oestrich, Alfred, Rumford (9)  
 O'Meara, Edward S., Ellsworth (5)  
 Ormandy, Laszlo, 22 Deering St., Portland (3)  
 Osler, Jay K., State & Grove Sts., Bangor (10)  
 O'Sullivan, William B., 131 Elm St., Biddeford (15)  
 Ottum, Alvin E., 31 Deering St., Portland (3)

## P

Page, Rosario A., Sweden St., Caribou (2)  
 Parcher, George, Main St., Ellsworth (5)  
 Parizo, Harry L., 2 Silver St., Waterville (6)  
 Parker, James M., 31 Deering St., Portland (3)  
 Parsons, Neil L., Damariscotta (8)  
 Patane, Joseph M., 21 Washington Ave., Old Orchard (15)  
 Patterson, James, 614 Highland Ave., So. Portland (3)  
 Pearson, Henry, Brownfield (9)  
 Pearson, John J., Jr., Old Town (10)  
 Peaslee, Clarence C., 42 Goff St., Auburn (1)  
 Peaslee, C. Capen, Jr., 339 Woodfords St., Portland (3)  
 Penta, Walter E., 316 Woodfords St., Portland (3)  
 Philbrick, Maurice S., 292 Water St., Skowhegan (12)  
 Piper, John O., 177 Main St., Waterville (6)

Platt, Anna, Friendship (7)  
 Plummer, Albert W., Lisbon Falls (1)  
 Pollsner, Saul R., 188 State St., Portland (3)  
 Pomerleau, Ovid F., 177 Main St., Waterville (6)  
 Pomerleau, Rodolphe J. F., 177 Main St., Waterville (6)  
 Porter, Joseph E., 22 Arsenal St., Portland (3)  
 Poulin, James E., 177 Main St., Waterville (6)  
 Poulln, J. Emile, 198 Lisbon St., Lewiston (1)  
 Pratt, Edwin F., 14 Pleasant St., Richmond (8)  
 Pratt, George L., Farmington (4)  
 Pratt, Harold S., Livermore Falls (1)  
 Pratt, Loring W., Waterville (6)  
 Pressey, Harold E., 23 Hammond St., Bangor (10)  
 Priest, Maurice A., State House, Augusta (6)  
 Pritham, Fred J., Greenville Jct., (11)  
 Pritham, Howard C., Greenville Jct., (11)  
 Proctor, Ray A., 3 Teague St., Caribou (2)  
 Proctor, Thomas E., Boothbay Harbor (8)  
 Provost, Helen C., 48 Green St., Augusta (6)  
 Provost, Pierre E., 48 Green St., Augusta (6)  
 Purinton, Watson S., 15 Ohlo St., Bangor (10)  
 Purinton, William A., 15 Ohlo St., Bangor (10)

## R

Rand, Carleton H., 219 Oak St., Lewiston (1)  
 Rand, George H., Livermore Falls (1)  
 Randall, Ray N., 19 Sabattus St., Lewiston (1)  
 Read, Seth H., 15 Church St., Belfast (13)  
 Reed, Howard L., Skowhegan (12)  
 Reed, James W., Farmington (4)  
 Reeves, Edward L., 38 Market St., So. Paris (9)  
 Reeves, Helene M., 38 Market St., So. Paris (9)  
 Renwick, Ward J., 102 Goff St., Auburn (1)  
 Reynolds, Arthur P., 181 Main St., Presque Isle (2)  
 Reynolds, John F., 101 Main St., Waterville (6)  
 Reynolds, Ralph L., 101 Main St., Waterville (6)  
 Richards, Carl E., 28 Winter St., Sanford (15)  
 Richardson, C. Earle, 3 Cumberland St., Brunswick (3)  
 Ridlon, Magnus G., Kezar Falls (3)  
 Ridlon, Magnus F., 99 Broadway, Bangor (10)  
 Risley, Edward H., 27 College Ave., Waterville (6)  
 Robertson, George J., Central Maine San., Fairfield (6)  
 Robinson, Carl M., 31 Deering St., Portland (3)  
 Robinson, Edward F., Falmouth (3)  
 Rock, Daniel A., 477 Main St., Lewiston (1)  
 Ross, H. Danforth, 28 Winter St., Sanford (15)  
 Ross, Maurice, 372 Main St., Saco (15)  
 Roussin, William T., 48 Bacon St., Biddeford (15)  
 Rowe, Daniel M., 306 Congress St., Portland (3)  
 Rowe, Gunthner H., Livermore Falls (1)  
 Rowe, Linwood M., 250 Penobscot St., Rumford (9)  
 Rowe, William T., 306 Congress St., Portland (9)  
 Roy, Leopold O., 54 Pine St., Lewiston (1)  
 Royal, Albert P. Jr., 82 Maine Ave., Rumford (9)  
 Ruhlin, Carl W., 205 French St., Bangor (10)  
 Russell, Blinn W., 98 Pine St., Lewiston (1)  
 Russell, Daniel F. D., Leeds (1)

## S

Sanders, Stephen W., 120 Main St., Winthrop (6)  
 Santoro, Domenico A., 756 Congress St., Portland (3)  
 Sapiro, Howard M., 175 State St., Portland (3)  
 Savage, Richard L., Ft. Kent (2)  
 Sawyer, Samuel G., Cornish (3)  
 Schmidt, Lorrimer M., Veterans Adm., Togus (6)  
 Schwartz, Carol, 38 Deering St., Portland (3)  
 Scolten, Adrian H., 32 Deering St., Portland (3)  
 Scribner, Herbert C., 259 Union St., Bangor (10)  
 Sewall, Elmer M., Orono (10)  
 Sewall, Kenneth W., 173 Main St., Waterville (6)  
 Shanahan, William H., 1231 Forest Ave., Portland (3)  
 Shapero, Benjamin, L., 73 Broadway, Bangor (10)  
 Shapleigh, Edward E., Kittery (15)  
 Shelton, M. Tieche, 284 Water St., Augusta (6)



Shippee, James N., 122 Main St., Wintthrop (6)  
 Shubert, Alice J., 127 Leighton St., Bangor (10)  
 Shubert, William M., 127 Leighton St., Bangor (10)  
 Shurman, Hans, 381 Main St., Dexter (10)  
 Silsby, Samuel S., 11 Ohio St., Bangor (10)  
 Simpson, Margaret R., P.O. Box 275, Togus (6)  
 Sinecock, Wiley E., Caribou (2)  
 Skinner, Peter S., 112 Ohio St., Bangor (10)  
 Sleeper, Francis H., State Hosp., Augusta (6)  
 Small, Amos E., 31 Central St., Bangor (10)  
 Small, Foster C., 169 High St., Belfast (13)  
 Small, Fitz E., 260 Main St., Biddeford (15)  
 Small, Harold E., 31 Grove St., Augusta (6)  
 Smith, Edgar J., 32 Lawrence St., Fairfield (12)  
 Smith, Frank A., 343 Main St., Westbrook (3)  
 Smith, Gerald R., Ogunquit (15)  
 Smith, Henry F., Jackman Sta. (12)  
 Smith, Hugh A., 489 State St., Bangor (10)  
 Smith, Jacob, 118 Front St., Bath (8)  
 Smith, Joseph I., 118 Front St., Bath (8)  
 Smith, Kenneth E., 73 Deering St., Portland (3)  
 Smith, LeRoy H., Winterport (10)  
 Smith, William W., Ogunquit (15)  
 Somerville, Robert B., 264 Main St., Presque Isle (2)  
 Somerville, Wallace B., Mars Hill (2)  
 Sommerfeld, Kurt A., 6 Maine Ave., Gardiner (6)  
 Soule, Gilmore W., 463 Main St., Rockland (7)  
 Southworth, John D., Veterans Adm., Togus (6)  
 Sowles, Horace K., 131 State St., Portland (3)  
 Spear, William, Lisbon Falls (1)  
 Spencer, Jack, 31 Deering St., Portland (3)  
 Stanhope, Charles N., Dover-Foxcroft (11)  
 Stanwood, Harold W., 5 Franklin St., Rumford (9)  
 Stebbins, Arthur P., 209 State St., Bangor (10)  
 Steele, Charles W., 472 Main St., Lewiston (1)  
 Stein, Ernest W., Stockton Springs (13)  
 Stein, Abraham O., 132 Main St., Belfast (13)  
 Stetson, Elbridge G. A., Brunswick (3)  
 Stetson, Rufus E., Damariscotta (8)  
 Stevens, Carl H., 1 Court St., Belfast (13)  
 Stevens, Eugene L., 38 Church St., Belfast (13)  
 Stevens, Theodore M., 32 Deering St., Portland (3)  
 Stewart, Delbert M., 15 Main St., So. Paris (9)  
 Stiekney, Laura B., Saco (15)  
 Stiles, Esmond, St. Stephen, N.B. (14)  
 Stimpson, Arthur J., Kennebunk (15)  
 Stinchfield, Walter S., Court St., Skowhegan (12)  
 Stitham, Linus J., 8 Main St., Dover-Foxcroft (11)  
 Stott, Ardenne A., 117 Front St., Bath (8)  
 Strickland, Marion S., Canaan (12)  
 Strout, Arthur C., Dexter (10)  
 Stuart, Albert F., 23 Noyes St., Portland (3)  
 Stuart, Ralph C., Guilford (11)  
 Stubbs, Richard H., 133 State St., Augusta (6)  
 Sturgis, Karl B., State School, Pownal (3)  
 Sullivan, George E., Bingham (12)  
 Sullivan, John R., 59 Spruce St., Millinocket (10)  
 Sumner, Charles M., West Sullivan (5)  
 Sweatt, Linwood A., 48 Drummond St., Auburn (1)  
 Swett, Clyde I., Island Falls (2)  
 Sylvester, Philip H., Bristol Rd., Damariscotta (8)

## T

Tabachnick, Henry M., 110 Park Ave., Portland (3)  
 Tapley, Eugene D., 17 High St., Belfast (13)  
 Tashiro, Sabro, Veterans Adm., Togus (6)  
 Taylor, Cornelius J., 16 State St., Bangor (10)  
 Taylor, Herbert L., Dexter (10)  
 Taylor, Paul E., 9 Wentworth St., Kittery (15)  
 Tetreau, Thomas, 44 Monument Sq., Portland (3)  
 Thacher, Henry C., 11 Turner St., Auburn (1)  
 Thaxter, Langdon T., 31 Deering St., Portland (3)  
 Thegan, W. Edward., Bucksport (5)  
 Theriault, Louis L., 197 Center St., Old Town (10)  
 Thomas, Camp C., Greene (1)

Thompson, Ceil F., Phillips (4)  
 Thompson, John B., 9 Central St., Bangor (10)  
 Thompson, Milton S., Brooke Gen. Hosp., Ft. Sam Houston, Texas (3)  
 Thompson, Philip P. Jr., 704 Congress St., Portland (3)  
 Tibbetts, Otis B., 33 Court St., Auburn (1)  
 Tibbetts, Raymond R., Bethel (9)  
 Tobie, Walter E., 3 Deering St., Portland (3)  
 Todd, Albert C., 410 So. Main St., So. Brewer (10)  
 Torrey, Marcus A., Ellsworth (5)  
 Torrey, Raymond L., Searsport (13)  
 Tougas, Raymond A., Brunswick (3)  
 Tounge, Harry G., 12 Union St., Camden (7)  
 Tousignant, Camille, 111 Pine St., Lewiston (1)  
 Toussaint, Leonid G., Ft. Kent (2)  
 Tower, Elmer M., Ogunquit (15)  
 Towne, Charles E., 50 Main St., Waterville (6)  
 Towne, John G., 135 Main St., Waterville (6)  
 Trask, Burton W., Jr., Murfreesboro, Tenn. (6)  
 Trowbridge, Mason, Jr., Ellsworth (5)  
 Turner, Harland G., R.F.D. 2, Norridgewock (12)  
 Turner, Oliver W., Boothbay Harbor (6)  
 Tweedie, Hedley V., 76 No. Main St., Rockland (7)  
 Tyson, Forrest C., R.F.D. 5, Augusta (6)

## U

Ulpts, Reynold G. B., 67 Webster St., Lewiston (1)  
 Upham, Roscoe C., 15 Creseent St., Biddeford (3)

## V

Vachon, Robert D., 28 Winter St., Sanford (15)  
 Valentine, John B., Veterans Adm., Togus (6)  
 Ventimiglia, William A., 22 Deering St., Portland (3)  
 Vickers, Martyn A., 268 State St., Bangor (10)  
 Viles, Wallace E., Turner (1)  
 Villa, Joseph A., 17 Main St., So. Paris (9)

## W

Wadsworth, Richard C., 489 State St., Bangor (10)  
 Wagner, Samuel, Bucksport (5)  
 Walters, Wilson H., 16 Summit St., Fairfield (12)  
 Ward, John V., 131 State St., Portland (3)  
 Warren, Lyman O., Jr., 156 No. Main St., Brewer (10)  
 Wasgatt, Wesley N., 41 Talbot Ave., Rockland (7)  
 Weatherbee, George B., Hampden Highlands (10)  
 Webb, Harold R., Brunswick (3)  
 Webber, Edward P., York Harbor (15)  
 Webber, Isaac M., 29 Deering St., Portland (3)  
 Webber, John R., Houlton (2)  
 Webber, L. Dean, Kittery (15)  
 Webber, Merlon A., Pittsfield (10)  
 Webber, M. Carroll, 735 Stevens Ave., Portland (3)  
 Webber, Samuel R., 136 Main St., Calais (14)  
 Webber, Wallace E., 297 Main St., Lewiston (1)  
 Webber, Wedgwood P., 376 Main St., Lewiston (1)  
 Webster, Fred P., 101 Vaughan St., Portland (3)  
 Weeks, DeForest, 158 Pleasant Ave., Portland (3)  
 Weisman, Herman J., 76 Linerock St., Rockland (7)  
 Weisz, Hans, 164 Main St., Lincoln (10)  
 Welch, Francis J., 44 Deering St., Portland (3)  
 Wellington, J. Foster, 655 Congress St., Portland (3)  
 Wescott, Clement P., Windham Hill (3)  
 Weymouth, Currier C., Farmington (4)  
 Weymouth, Frank D., 46 No. Main St., Brewer (10)  
 Weymouth, Raymond E., Bar Harbor (5)  
 Wheat, Frederick E., 773 Main St., Westbrook (3)  
 White, Verdel O., No. Jay (4)  
 White, William J., Howland (10)  
 Whitney, Byron V., 156 State St., Bangor (10)

Whitney, Harlan R., 655 Congress St., Portland (3)  
Whitney, Ray L., Cape Porpoise (15)  
Whittier, Allice A. S., 143 Neal St., Portland (3)  
Whitworth, John E., 116 Hammond St., Bangor (10)  
Wight, Donald G., 30 Mitchell Rd., So. Portland (3)  
Wilbur, Herbert T., Jr., Southwest Harbor (5)  
Wiley, Arthur G., Bar Mills (15)  
Williams, Edmund P., Oakland (6)  
Williams, James A., 40 Pleasant St., Mechanic Falls (1)  
Williams, Ralph E., Freeport (3)  
Wilson, Harry M., Middle St., Bath (8)  
Wilson, Robert W., Veterans Adm., Togus (6)  
Winchenbach, Francis A., 910 Washington St., Bath (8)  
Woodcock, Allan, 35 Second St., Bangor (10)

Woodman, Arthur B., Falmouth Foreside (3)  
Wright, LaForest J., 411 Union St., Bangor (10)

X

Xaphes, Chrysaphes J., 107 Main St., Biddeford (15)

Y

Young, Ernest T., Millinocket (10)  
Young, George E., 159 Water St., Skowhegan (12)  
Young, H. John, Jonesport (14)  
Young, William J., 92 Wood St., Lewiston (6)

Z

Zikel, Herbert M., Wilton (4)  
Zolov, Benjamin, 296 Congress St., Portland (3)

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Notices—Continued from page 158

**Department of Health and Welfare**  
**Services for Crippled Children**  
**Clinic Schedule — 1949**

**ORTHOPEDIC CLINICS**

*Portland* — Maine General Hospital, 11.00 a. m.: Jan. 10, Feb. 14, Mar. 14, Apr. 11, May 9, June 13, July 11, Aug. 8, Sept. 12, Oct. 10, Nov. 14, Dec. 12.

*Lewiston* — Central Maine General Hospital, 9.00-11.00 a. m.: Jan. 21, Feb. 18, Mar. 18, Apr. 15, May 20, June 17, July 15, Aug. 19, Sept. 16, Oct. 21, Nov. 18, Dec. 16.

*Rumford* — Community Hospital, 1.30-3.00 p. m.: Mar. 16, June 15, Sept. 21, Dec. 21.

*Waterville* — Thayer Hospital, 1.30-3.00 p. m.: Feb. 24, Apr. 28, June 23, Aug. 25, Oct. 27, Dec. 22.

*Rockland* — Knox County Hospital, 1.30-3.00 p. m.: Feb. 17, May 19, Aug. 18, Nov. 10.

*Machias* — Normal School, 1.30-3.00 p. m.: Feb. 9, Apr. 13, June 8, Aug. 10, Oct. 12, Dec. 14.

*Presque Isle* — Northern Maine Sanatorium, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 11, Mar. 8, May 10, July 13, Sept. 13, Nov. 2.

*Houlton* — Aroostook General Hospital, 9.00-11.00 a. m.: Mar. 7, July 12, Nov. 1.

*Fort Kent* — Normal School, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 12, May 11, Sept. 14.

*Bangor* — Eastern Maine General Hospital, 1.30-3.00 p. m.: Jan. 27, Mar. 24, May 26, July 28, Sept. 22, Nov. 17.

**CARDIAC CLINICS**

*Portland* — Maine General Hospital, 10.00-12.00 a. m.: Will be held every Friday with the exception of holidays.

*Bangor* — Eastern Maine General Hospital, 9.00 a. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

**HARD-OF-HEARING CLINICS**

*Waterville* — Thayer Hospital, 1.30-3.00 p. m.: Feb. 16, June 22, Oct. 19.

*By appointment only.*

**PEDIATRIC CLINIC SCHEDULE — 1949**

*Bangor* — Eastern Maine General Hospital, 1.30 p. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

*Waterville* — Thayer Hospital, 1.30 p. m.: Jan. 4, Feb. 1, Mar. 1, Apr. 5, May 3, June 7, July 5, Aug. 2, Sept. 6, Oct. 4, Nov. 1, Dec. 6.

*Presque Isle* — Northern Maine Sanatorium, 1.30 p. m.: Jan. 26, Mar. 23, May 25, July 27, Sept. 28, Nov. 16.

*By appointment only.*

**Tumor Clinics**

Sisters Hospital, Waterville, Maine, 1st and 3rd Thursdays, 10.00-11.00 A. M., Richard L. Chasse, M. D., Director.

Augusta General Hospital, Augusta, Maine, 1st Monday, 9.00 A. M., Leon D. Herring, M. D., Director.

Bath Memorial Hospital, Bath, Maine, 2nd Tuesday, 3.00-5.00 P. M., Francis A. Winchenbach, M. D., Director.

Maine General Hospital, Portland, Maine, Thursdays, 10.00 A. M., Joseph E. Porter, M. D., Director.

Presque Isle General Hospital, Presque Isle, Maine, Thursdays, 10.00-12.00 A. M., Storer W. Boone, M. D., Director.

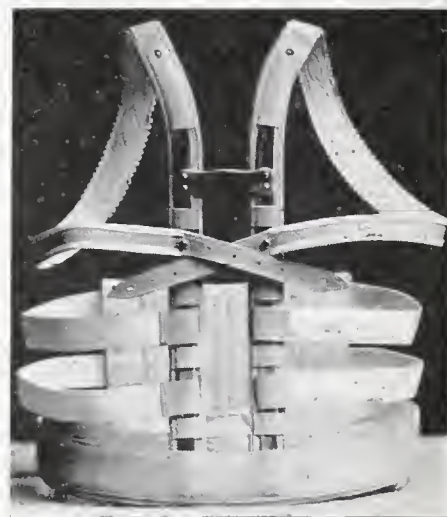
Madigan Memorial Hospital, Houlton, Maine, 2nd and 4th Wednesdays, 10.00-12.00 A. M., Joseph A. Donovan, M. D., Director.

Central Maine General Hospital, Lewiston, Maine, Tuesdays, 10.00 A. M., Waldo A. Clapp, M. D., Director.

St. Mary's General Hospital, Lewiston, Maine, Wednesdays, 3.30 P. M., Romeo A. Beliveau, M. D., Director.

Eastern Maine General Hospital, Bangor, Maine, Thursdays, 10.30 A. M., Magnus F. Ridlon, M. D., Director.

Thayer Hospital, Waterville, Maine, 2nd and 4th Thursdays, 10.00-11.00 A. M., Arthur H. McQuillan, M. D., Director.



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# The Journal of the Maine Medical Association

Volume Forty

Portland, Maine, July, 1949

No. 7

## PRESIDENTIAL ADDRESS\*

FORREST B. AMES, M. D.,  
*President, Maine Medical Association,*  
1948-1949.

*Members of the Maine Medical Association and  
Guests:*

I have always been intrigued by the subject matter of our President's address. Over the years I have listened with awe and admiration to words of rebuke and wisdom, from invective against the so-called "cults" to a semi-historical review of the progress of medicine from early times, through the era of epoch-making discoveries to the present day application of great modalities for alleviating human sickness.

Today, lacking the gift of oratory of most of my predecessors and the breadth of vision to scan the whole medical horizon and gather a coherent story of medicine as a whole, it occurred to me that I might profitably limit my field to the Maine Medical Association itself. I would like to discuss for a while some of the Association activities which it has been my privilege to watch for the past quarter of a century. To many of you this will be a repetition of facts already known; but my purpose is to emphasize events rather than to tabulate factual statistics.

To begin with, may we ask what is the Maine Medical Association? To many of our younger and other less active members the Association is a rather nebulous entity. Some have called it a closed corporation run by the "Old Guard." In the early years this appellation used to mean little but served as a source of amusement or even ridicule.

Later amusement gave place to a feeling of resentment and seemed to be based on a feeling of frustration of those who used the words.

As time went on the reaction became one calling for tolerance and a feeling of sorrow for such an expression of ignorance on the part of those whose contacts with the Association were too casual to allow accurate knowledge.

Finally for those who knew the facts there has come a feeling of pride in the oft-maligned "Old Guard." For it has come to mean a group, self-perpetuating in an orderly manner according to carefully followed constitution and by-laws and yet changing in personnel so that no one or more individuals could long direct or attempt to control policies.

In short, the "Old Guard" in the final analysis, was found to be made up of members of the Association, whose years of interest and service, had placed them in positions of temporary leadership in the organization. Except for these years of service and interest they were in no wise different from any other member of the group—old only in years of loyal service—and a guard because they were entrusted with the responsibility of caring for the interests of the group as a whole.

The Maine Medical Association then becomes a composite group of licensed medical practitioners headed by elected officers and made up in the ultimate aggregate of individual doctors living in all parts of the State. For further organization the doctors are organized by counties and by groups of counties to

\* Presented at the 95th Annual Meeting of the Maine Medical Association, Poland Spring, Maine, Tuesday, June 21, 1949.



form Districts. Each of these groups has its own elected officers and each carries a voice in the management of the whole Association.

Above the state is the national, or American Medical Association, the importance of which has more recently come to the fore as a result of political action in Washington.

To return to the Maine Medical Association. What have been some of our problems in the past years and how have they been met?

The average doctor of medicine, trained in a close patient-physician atmosphere has been prone to limit his field of activities to his profession and his patient. It has been hard to look beyond the limited horizon of personal contact and view some of the broader aspects of medical practice. But changing social and economic conditions have strained the close patient contacts and forced the doctor as an individual to a fuller realization of his broader civic responsibilities. With his super education and his position of such ultimate importance in the community, the doctor of medicine has become more and more a figure of greater importance in the every-day life of his community and state. To these broader fields the individual members of the Maine Medical Association have given more and more personal attention.

Some fifteen or more years ago, with the amalgamation of the homeopathic and the so-called regular schools of medicine still fresh, there came before our group the prospect of other types of medical practice. Not well understood, a natural feeling of non-acceptance came to the surface. A constructive suggestion was made that certain changes in our method of license would protect the medical profession and all other interested groups. The idea of a Basic Science Law was proposed and given serious consideration. In theory this law called for a single examination in the so-called Basic Sciences on which are founded the principles of medical practice. Successful candidates could then go on and practice any further methods of medical treatment in which they were specially trained. Final acceptance of medical practices would then be a matter of public choice, with the better trained practitioners more than likely to be accepted in larger proportion.

Some few of you will know the story of the failure to pass such a law, but fail it did, and separate boards of registration are now in operation in various fields of medical effort. Time, alone, will show whether such divisions are for the best interests of better medical care. I have heard the "Old Guard" severely criticised for the failure of passage of a Basic Science Law. However, I have a feeling that the failure was due, not to any lack of sincere effort on the part of our Association leaders, but rather to the hazards of our approach to our political personnel in Augusta. Passing years have removed many of these hazards as I will mention later.

For a time members of our Association passed through a period of mal-practice suits for real or fancied causes and the question of liability insurance came to the fore. Discussion was at times not too cool; but finally it was accepted that insurance through a small selected group of carriers would work for the best interests of all. And fortunate we were, too, to secure the services for legal advice, of our honorary member, Herbert E. Locke, who has served us so well and saved many a doctor from suit for alleged mal-practice. Leadership and unity of action were well proved in this particular field.

I note now a period of several years when our Association carried on with but little of major importance to distract the members from their daily duties in the practice of medicine.

Then came World War II. Of the part played by our Maine doctors during the war years I can speak only briefly: because a proper discussion would lead to a saga of unselfishness — community and national service and in some cases death either in the line of military duty or because of extra physical burdens carried by already over-worked individuals. Such a saga is worthy of a separate address, and cannot be given justice at this time.

As the country began to readjust itself in the last war years and since, there has been a marked change both in medical practice and in the attitude of the people toward medicine. No longer was the doctor considered only as a family physician but he found himself caught in a new current of thinking, the so-called field of public relations. The politicians began to consider themselves responsible for the health of their constituents primarily for vote-getting purposes—and the doctors found themselves drawn into the forefront of attention. They were threatened with loss of their old individualism and subject to political control.

How did the Maine Medical Association meet this new challenge?

About three years ago, the Association leaders realized the importance of stronger organization in order for their members to properly safeguard their interests and meet the new ideas of wider public relations and threatened political control.

At this stage the American Medical Association had not yet fully organized its leadership and much of the necessary protective procedure fell to the individual states.

In Maine it was realized that another type of advisor was necessary. The idea of an Executive Secretary was not new in other states but such had not been utilized in our group. Our membership quickly realized the value of such an officer and approval was unanimous. With the memory of our lack of political liaison still fresh, it was decided that first of all we should seek some person who possessed the "Know-how" of affairs at Augusta. In order to combat pres-

sure from Washington it was necessary to strengthen our standing at home. On a national level the question of voluntary or compulsory medical insurance was taking shape and the Maine Medical Association needed to develop medical insurance plans of its own to offer the people of the state. An Executive Secretary was employed. At first his duties were ill-defined and coordinate activity seemed difficult of attainment. However, again the "Old Guard" in the persons of the Association leaders aided by a competent executive who surely did know his way around in Augusta, evolved a working program and methods of procedure. Because of our inability to utilize the already organized Blue Cross hospital insurance plan an effort was made to secure an enabling act which would allow the Maine Medical Association to sponsor a suitable prepaid insurance if and when the proper system should be available.

Two years ago, our Association again met with loss at Augusta when its request for an insurance enabling act was refused. However, with the help of our Executive Secretary and an unusually efficient committee a plan for voluntary surgical insurance was worked out and Maine now joins most of the other states in plans which have already enrolled over fifty million subscribers throughout the nation.

That our members were awake to the new challenges was well shown by the unanimous adoption of a big increase in dues, paid with a loss of only 12 from our total membership of 748.

Tribute to other Association workers during these years would require a reading of the list of various committees, both standing and special, which have functioned year by year on a county and state level. Activities of these committees have covered the whole field of medicine from its scientific aspects to its broadest scope of public relations. Nothing of note has been long overlooked by men of vision and action.

This year the standing of the Maine Medical Association at Augusta has been markedly improved. Bills involving help to our State and private institutions and training of Nurses' Attendants failed only because of lack of financial appropriations and not because of lack of friendly relationship between our medical group and the legislators.

Friendly relations of years standing have been cemented between doctors of medicine and their colleagues, the dentists.

And now, as an Association, we face the big challenge of the day — the threat of government control over our members and their daily practice; the contest between government controlled compulsory medical insurance and the survival of private medical enterprise as expressed by the voluntary health plans offered by the medical profession. The American Medical Association has at last organized to meet the challenge on a national level. Through the press and by letters from the national office our members have been given the facts of the campaign as it has progressed to date. In this annual session you have heard and will hear more from our national leaders of the past background and future plans.

Many of our past problems are of continuing and increasing importance as we face the future.

During this convention you have elected new and able men to direct the activities of your Association. They will realize that we are well started in our work on the National education program, as I have already stated.

They are well aware of other health problems relative to distribution of medical facilities, nursing care and aid to present hospital centers.

They will not forget the young men of our state, some of them your own sons, whose desire to enter the field of medical study should be fostered by carefully worked out plans for support of their medical training.

They will not forget the people, their people and patients who look to their doctor as a healer of the body and guiding helper.

And so today gentlemen, I give you the Maine Medical Association, proud of its 96 years of organization; proud of its 748 members, some of whom, as a reward of labor, have formed an ever-changing "Old Guard" whose duties have been to safeguard the interests of the group as a whole; whose past, present and future officers have worked and will continue to work with a singleness of purpose beyond reproach. The days of mud-slinging are over. No thought is now present except to so develop our skill as medical practitioners and our relationship with the people of Maine that there shall be developed for Maine the highest quality of medical service for the greatest number of people and according to the best traditions of our independent American way of life.

More attention should be directed to the problem of pulmonary tuberculosis in the old, which is often an active process with a high proportion of sputum-

positive cases. The onset is insidious, and the symptoms are commonly ascribed to old age.—F. J. Hebert, M. D., *The Lancet*, Aug. 14, 1948.



## JUVENILE DELINQUENCY AND CRIMINAL HOMICIDE

D. A. THOM, Director, Habit Clinic for Child Guidance, Boston, Massachusetts

The scope of this discussion will be confined to a brief summary of the problems of juvenile delinquency with particular emphasis placed upon juvenile offenders who commit criminal homicides. Present and pending legislation with reference to this group will be given consideration.

Although statistical data relative to the incidence of juvenile delinquency throughout the country is difficult to assemble due to the lack of any legislation requiring that such records be kept, the United States Children's Bureau began in 1927 to compile records on Juvenile Court Statistics.<sup>1</sup> The accumulation of records has been expanding gradually since its beginning, from a relatively small number of courts (forty-three) until the year 1945 when 374 courts throughout the country were included. Two hundred eighty-six of these courts served areas with populations of less than 100,000.

The remaining courts were located in the more populous areas. They represented approximately 37% of the total population of the country. During the seven years, 1938-1944 inclusive, reports from 78 courts serving a population of 100,000 or more showed that the actual number of cases increased from 53,134 to 84,879, a percentage increase of 60%. 54% for boys and 88% for girls. For the year 1945, a report was made covering 374 courts, 88 of which were located in the larger cities, and 286 in suburban areas. A total of 122,851 cases represented an increase of 6% over 1944. It is encouraging to note, however, that for 1946 there was an indicated decrease of 15% in the delinquency rate over the 1945 figure.

With reference to criminal homicides which are not included in the statistics on juvenile delinquency, the following statement is pertinent to this discussion: There was a steady increase in criminal homicides committed by boys under 18 years of age from 193 in 1941 to 322 in 1945. There has been a steady decrease from this high point to 220 for the year 1948.<sup>2</sup> The number of criminal homicides committed by offenders under 18 years of age is considerably less than 1% of the total arrests for the same age group for the same period. (19,261 arrests were made of boys under 18 years of age which represents 3.4% of the total arrests for all age groups in the first six months of 1947.)

Two important questions now confront us in our effort to analyze these data for the purpose of acquiring valid material upon which to base sound legislation. (1) How many of these offenses legally and officially regarded as homicides were actually murders and (2) How many were motivated by sexual drives. Dr. Ralph S. Banay in a study of 20 individuals under 17 years of age who had committed

homicides<sup>3</sup> felt that murder was not a satisfactory classification of these offenses. He pointed out, "Legal classification suggests much more homogeneity in the quality of offenses committed by these children than actually exists." Dr. Banay classified these homicides according to the quality of the act, and they can be briefly summarized as follows: 1. Homicides associated with "acquisitive ventures," i.e., breaking and entering. 2. Quarrels. 3. Sex activity. 4. Disintegrative influences of home. 5. Mental defective or borderline offenders. 6. Psychotic. 7. Model child.

In a summary of this excellent contribution, Dr. Banay designated six of twenty cases as being psychotic. The others were borderline defectives and children who had been subjected to disintegrated homes and demoralized neighborhoods and although six of these cases were reported to have had a sexual connotation, only one was diagnosed as a sexual psychopath.

From the writer's personal experience, and a review of the available literature, the following conclusions seem valid: Criminal homicides as committed by juveniles are rarely premeditated murders, and where such premeditation is established, it is invariably the result of a disordered mind. Of all the criminal homicides which occur in relation to sexual acts, relatively few are committed by sexual psychopaths. He recognizes three well-defined groups of sexual offenders that may be considered with reference to personality development and evidence of mental illness that has occurred prior to the time of the commission of their last criminal act.

Group I. Those who have a long and uninterrupted history of asocial behavior of a type that invariably leads to serious sexual offenses.

Group II. Those who committed a serious sexual offense without previous evidence of indication of any predisposition toward criminal acts of any kind (the model boy).

Group III. Those in whom there have been personality changes for a period of months to one or two years previous to the commission of the crime. These personality deviations are noted frequently in retrospect and are indicative of mental illness rather than criminalistic tendencies.

The two following cases are typical of the first group, long uninterrupted history of poor social adjustment: Woodie — Age 16, 8th grade — I. Q. 91. Stepfather and mother were living together in a good neighborhood, well above marginal level and a very satisfactory environment. Father had deserted when patient was very young. As to Personal History, he was recognized as a problem in training and discipline

at three years of age. Between his fifth and sixth years he had measles and whooping cough accompanied by convulsions. During the next three years he became increasingly difficult at home. He teased and bullied and at times was cruel to the two younger children. He got a great deal of satisfaction in playing mean tricks, such as putting pepper in the baby's food to make him cry. When he was nine and a half years of age he was referred to a child guidance clinic by the school nurse because he was destructive, stubborn, and unmanageable at school. (Nothing of value resulted from the clinic contact because of lack of parents' cooperation.) His asocial behavior continued and was characterized as mean, cunning, and cruel. He laid careful plans to get other children into trouble and then made sure that they got caught and was only satisfied when they were punished. He molested young girls by lifting their skirts and grabbing at their genitalia. Mutual masturbation, lying, stealing, destructiveness and bullying younger children was his idea of a good time. He was quite indifferent to praise, blame, rewards or punishment. He failed to profit from experience. His life was spent in complete indifference to either pain he inflicted upon others or punishments to which he was subjected.

At the age of twelve years he was referred again to another guidance clinic, and after five months of contact with the clinic, where therapeutic interviews were carried out irregularly, the case again was closed because of lack of parental cooperation.

At fourteen years, he was examined at a school for mentally defective children, I. Q. 89, not feeble-minded. Four months later he was expelled from school for physically assaulting a girl. Case was dismissed in court because of insufficient evidence. Five months later, he was brought into court on a similar charge (assaulting a girl), and put on probation. One year later, when he was 15 years, 9 months of age, he committed his third assault on a girl, slashing her about the face with a weapon. The damage inflicted required sixteen stitches. He was arrested, charged with assault and attempt to rape and was released on bail pending trial in a higher court. (No psychiatric examination had been requested.) One month later, he was arrested, charged, and convicted of committing one of the most atrocious murders on record. The details of the crime are unimportant except as evidence of a strong sadistic drive that subjected a thirteen-year-old girl to excruciating torture over a period of many hours, perhaps days.

The second case: Charlie, age 17, 7th grade vocational school — I. Q. 95. Mother and father were living together in marginal circumstances receiving aid from relief organizations. Father had been diagnosed as manic-depressive, with two admissions to state hospitals. One aunt died in a state hospital. Mother, who had been placed in a foster home at six years of age, had a high school education. Her morals were reported well below community level. Charlie

was the third of seven living children. The oldest girl, eighteen, was committed to training school for running away, staying out nights and associating with bad companions. Other children were getting by in school and in the community. Regarding Personal History, the mother reported Charlie was always a "nervous" child, very restless, always looking for excitement and adventure. He was a "lone wolf" type and kept by himself. A friendship never lasted more than a week or two. He avoided all rough games and was extremely cautious, fearful of getting hurt. He had no interest in games or sports and no hobbies, except eating. Lying, stealing and truancy began in early life. He was always irregular in school attendance and did not like to work or study. He repeated the 5th grade. He was transferred to vocational school when he reached 7th grade. The outstanding episodes in his delinquent career were as follows:

At the age of six this boy was sent away from home to an institution for unmanageable children and truants where he remained for seven months. He was returned to his home in November, 1936. For the next seven years, he got by without court commitment, but was considered an extremely difficult child. At the age of thirteen, December, 1943, he was arrested for assault and battery on a ten-year-old boy whom he undressed and left by the wayside. He was committed to one of the training schools for delinquent boys and at the end of five and a half months was paroled (May, 1944). In October, 1944, six months later, he assaulted a seven-year-old girl, tearing off her clothes and bruising her body. He was again committed to a training school for older boys and at the end of eight months he was paroled (June, 1945). The same month he was paroled he was returned to the training school, charged with chasing a twelve-year-old girl with a knife. At the end of 1945 he was allowed to go into the community, again on parole. Early in March, 1945, a period of less than three months after leaving the training school, he was arrested once more, charged with assault and intent to rob a twelve-year-old boy whom he had thrown to the ground, disrobed, and gone through his pockets. Following this episode, for the fifth time, he was returned to the training school where he remained until the early part of February, 1947, when, difficult as it may be to believe, he again was paroled. Within a period of three weeks, he was arrested, charged with and pleaded guilty to an atrocious murder of an eleven-year-old girl.

You are all familiar with the basic personality make-up of these two boys. Both had early, long and uninterrupted histories of inability to measure up to the accepted standards of their communities. Both were extremely egotistical, bragged about their ability to "beat the rap." "No one would ever be able to get anything on me," as one expressed it, and the other bragged that he could show up the police any



time he wanted to. Neither boy showed any anxiety or worry over his present predicament. Eating and sleeping were their favorite pastimes and both participated in any social contacts in which they were accepted while in jail. There were no feelings of guilt, remorse or regret; never a word of sympathy for their victims or their families. There was no feeling of concern about the anguish they had caused their own families. Their mean, cruel, sadistic traits manifested in early life persisted, becoming more and more threatening to society as they advanced in age. Neither one of these boys was in any way affected by punishment, nor were they receptive to any aid offered by family, friends, or clinic. The writer personally is extremely doubtful if there is any body of knowledge now available which will materially alter this type of mental aberration. And it should be noted at this point that both of the victims in these cases were young girls. As so ably expressed by Neilsen and Thompson in their book entitled, *The Engrammes of Psychiatry*,<sup>4</sup> "These individuals have no concept of time, no past, no future, just a present. With no future there is no sense of guilt and no fear. They suffer no pangs of remorse in the present. The past does not exist except as a world of phantasy from which they build up exploits which satisfy their egos."

The *second group* who commit criminal homicides with a sexual connotation without evidence of predisposition toward criminal acts is exemplified in the following case:

Tom was a thirteen-year-old, white, Protestant boy of average intelligence. He had just completed the seventh grade, the oldest of three children living in an upper-middle-class neighborhood. The father was of Slovakian extraction, a graduate of a technical school, employed as a chemist. It was reported by the family minister that the father was a highly tempered person who was disposed to use strong military tactics in his attitude toward his children. He made demands and gave orders, rarely taking time to explain or counsel with them. He was said to have inflicted rather severe punishment on the boy when angry, but there was no evidence that these severe methods of discipline had been used routinely. On one occasion it was reported that he struck the boy, knocked him down, and Tom hit his head against the radiator. The next morning he inquired of the boy how he had cut his head. When told, he denied he had anything to do with it.

The mother was an easy-going sort of individual said to be rather disorganized in her work habits and in her thinking. Consequently, there was a good deal of conflict with her husband who was orderly, rigid, exacting and demanding. It appeared that rather violent quarrels had taken place between mother and father and on one occasion she sustained a scalp wound when father threw a dish at her.

Tom embarked upon life after a prolonged and

difficult labor, said to have lasted two and a half days, which left a marked malconformation of the head. This disappeared in a relatively short time. The developmental history reveals nothing unusual other than the ordinary diseases of childhood without complications. There is, however, a definite history of anoxia by carbon monoxide gas at the age of five years, during which time the patient was unconscious and the mother was also involved in this accident. On another occasion the boy was unconscious when hit between the eyes by a baseball. He made a speedy recovery and there was no neurological evidence of trauma.

It was reported by those outside the home who did not know the family intimately that Tom was a well-behaved, courteous, hard-working youngster. At school he did well in his studies with the exception of mathematics. His work was neat and orderly: his effort and initiative were commendable. He was interested in church activities, was a member of the Boy Scouts and participated in outdoor sports. It was stated that although he was not disliked, he did not seem to be fully accepted by the group, and at times he was silly and boisterous. He was a good worker and industrious. He had a large newspaper route, was thrifty about his expenditures and saved considerable money. There was no previous history of delinquency and it was reported that he was on good terms with Mrs. S., the victim of his crime, who was one of his newspaper customers. In talking with the family minister, who apparently had been looked upon as a confidant and friend of all the family, the following information was obtained. He stated that Tom had always been looked upon by other children as being a bit queer and was frequently called *Gruesome* as a nickname because he appeared to enjoy making remarks of a morbid and gruesome nature. For example, on one occasion while watching a boy coast downhill on his bike, he remarked that he would like to see him dash his head against a wall so that he could shovel up the brains. He told the minister that he had been dreaming of murders for weeks before he committed the crime. This latter remark, however, he denied to the doctor. He occasionally displayed considerable emotional instability in his temper outbursts. Once, he beat up a couple of boys about his own age and size without adequate provocation. At times when the minister visited the home he would rush up to him and throw his arms around his neck, in a sort of strangle hold as the minister explained, while other members of the family usually received him in a very dignified manner. The rather conflicting accounts of this boy's conduct are of interest in an effort to evaluate the predictability of criminalistic tendencies.

Briefly stated, the facts regarding the homicide for which he was arrested and pleaded guilty are as follows: In the late afternoon of July 3, 1947, after he had delivered his papers, he returned to the home of

his victim stating that he went back to look for his jackknife which he thought he had lost in that locality. While he was wandering around outside the house, the victim came to the door and inquired what he wanted. He told her he was looking for his knife and at the same time requested a drink of water. As he recalled the events, he went to the door to get the glass of water and while she was drawing it from the fancet, he picked up an empty milk bottle and hit her over the head, knocking her down. It appears that she battled with the boy, scratching his face and making him very angry. After battling him for some time, in which he got pretty well scratched up, he reached out and grabbed a towel and twisted it around her neck. After she was completely subdued, he found a laundry bag which he put over her head, drawing the cords tightly. He then unbuttoned her shorts and plunged a knife in her abdomen. He said he did this simply to find out if she were dead. If she were alive he was going to beat it as he knew there would be a lot of publicity when she came to. His only excuse for committing the crime was that his victim showed considerable irritability when she found him wandering around outside the house and appeared to be reluctant about giving him the glass of water which he requested.

The foregoing summary outlines very briefly the career of a youngster who was frequently referred to as the model boy, that is, a boy who had had no previous history of asocial activity, got along well in school, and although he was not one who might be called a good mixer, he had a few intimate friends and was accepted by the group in sports and games.

Frequently the picture of an individual's personality development as presented by parents is colored by fear and a desire to protect when the security of one of the group is threatened. Then again, the impression as portrayed by acquaintances and even teachers may fail to divulge many peculiarities and eccentricities which are significant, and the type of youngster who may be considered as a model boy in a neighborhood because of his contact with church and scouts, his industrious habits, interest in sports and games, etc., may be harboring a good deal of aggression and hostility which eventually manifests itself in criminal acts. The death wishes of children are usually not taken seriously, but from experience we know that they may precede serious offenses by long periods.

There is no doubt that there was a good deal of morbid fear and gruesome phantasy in the life of this youngster and undoubtedly the relationship with his father was tremendously important in the psychopathology of his personality make-up. The fear of the father was brought out very clearly in the last conference held with this boy. He was speaking of what the future held for him and remarked, "Some of the guys in here say I will get the hot seat; others that I will go to prison for life, and some, that I will go to an insane hospital; but I am sure I won't get the hot seat. Anyway, I don't want to go home just

now because I don't know what my father would do to me."

This was one of those cases that well might have resulted in patricide due to fear and hostility toward the father, but so far as the boy's social conduct was concerned, there was no way of predicting this serious offense.

As an illustration of the *third group* of cases showing a change in personality indicative of mental illness there is the case of Jack. The early life of this boy appeared to be rather uneventful. He was a conscientious, well-mannered, well-behaved boy who made friends easily, whose company was solicited by both boys and girls. In school there was one event in the eighth grade when he was found to have had some obscene pictures in his possession, and another when he submitted a poem as original which turned out to have been copied from a previous school publication. During his first three years in high school, however, he had an excellent record for deportment and scholarship. He was looked upon as reliable and upright. He worked hard, had a paper route and also was employed in a flower shop. His employer spoke of him as being most reliable. At the beginning of his senior year, however, the September prior to the commission of his crime which occurred in February, it was reported by those who knew him intimately that there was a marked change in his personality and habits. Whereas he was formerly interested in various school activities, sought the companionship of his associates, he began to assume an indifferent attitude. He showed a lack of initiative and ability to do his school work where heretofore he had been an honor student. He neither sought nor accepted companionship. He developed a rather resentful social attitude and criticized others for his inability to get along. Although he continued his contacts with the church, it was remarked that he was becoming quiet, and almost secretive and he expressed the idea that he was different from other boys. He said he didn't believe in the Bible. As time went on, it was felt that he was becoming sullen and hard to deal with if crossed. It was about this time that he was designated as room collector for his graduating class and it was later found that he was \$40 short in his accounts. He also was made treasurer of the Young People's Society at the church and he failed to deposit funds belonging to the society. His accounts were not kept in a businesslike way and although there was no evidence of intellectual impairment his judgment and reason and sense of moral obligation had become less dependable. It appeared that he was following along in the same pattern of moral conduct as his brothers. Things drifted along in this manner until the latter part of February when the criminal homicide was committed for which he was arrested, indicted, pleaded guilty and sentenced to life imprisonment.

The crime involved breaking and entering the home of one of the customers on his paper route late one evening and apparently going through the house look-



ing for valuables. It is assumed that he was interrupted by Mrs. E., the victim, who lived alone in the house, hit her over the head with a table lamp, placed her on the bed and retreated. Next morning Jack got up as usual and delivered his newspapers. It is alleged that he began to make remarks about the murder prior to the time it appeared in the paper. When the story of the murder did appear in the paper, he was avid for details, and inquired what would happen to the one who committed the murder. He carried on in what appeared to be a normal manner and the family noticed nothing unusual with reference to his routine activities, appetite, sleep, etc. His apprehension for the crime was brought about by the fact that he went to the police station and said he found a watch and asked the police what he should do about it. As invariably happens, one bit of evidence led to another and it was found that the watch belonged to the murdered woman. The boy was again called to the police station and made a frank confession stating that he needed money and went out to get it. He denied making a sexual assault and no evidence was presented that such an assault had actually taken place.

Although the personality changes briefly indicated would lead one to believe that we were dealing with an early schizophrenic condition, subsequent events have not born out such a diagnosis. It was reported by the psychiatrist in charge of the prison colony where this boy has been confined that there is no evidence of mental illness at the present time.

Here again it should be pointed out that in the case of both Tom and Jack, the last two cases cited, their victims were adult females, not children. Whether this observation has any significance or not the writer is unable to state at the moment.

Legislation may be summarized as follows: Several states have passed laws during the past few years dealing with sexual offenders (Wisconsin, Ohio, Michigan, California, Massachusetts and Illinois). Although the wording differs, the technicalities for operating the laws show certain features characteristic for each state. The broad comprehensive intent and purpose which all these legislative acts have as an objective is to protect the general public against sex crimes and sexual psychopaths. The sexual psychopath may be defined as the individual who cannot control his sexual drives and is therefore likely to commit an act of violence on others.

There are two important questions which now confront us:

(1) What is the extent to which the laws dealing with the sexual psychopath protect the public from sex crimes?

(2) Is there any other type of program that might provide a greater safeguard to the public against the sexual psychopath?

It has been pointed out that criminal homicides comprise approximately .6% of all arrests for boys under 18 years of age; rape makes up slightly more

than 1% of this same group. Consequently the legislation now effective is directed toward one out of every 60 American juvenile offenders, if it may be granted that the entire group, by any stretch of the imagination, could be classified as sexual psychopaths.

It is generally agreed that a relatively small number of criminal homicides have any sexual connotation and not all of these are committed by sexual psychopaths. Furthermore, we have learned from experience that probably not more than one-third of the sexual psychopaths, small as this group actually is, present any history or reliable symptomatology that would justify making a diagnosis of sexual psychopathy and restraining or committing them under any of the existing laws. It would appear that an over-abundance of legalistic bait is being utilized to catch an insignificant number of juvenile offenders usually after they have committed some serious crime.

All efforts on the part of those scientifically trained and interested in the psychic and sociological causes of delinquency to deal effectively with the delinquent as an individual, or delinquency as a social problem, have failed due to certain legislative barriers of a very ancient vintage. In dealing with the delinquent who is suffering from either constitutional or acquired defects which tend to render him potentially a dangerous criminal, we must wait until he has committed and been found guilty of his criminal act before he can be segregated and society protected from the atrocities committed by his particular type. The opinions and beliefs however well founded that the individual under consideration may commit a criminal act carries no weight in court. Relatively few courts are in a position to determine by social service investigations and psychiatric examination the type of individual who has committed a particular offense and when such investigations are made, no provision has been made in most of the states by law for adequate segregation and study of the responsibility of the offender. Furthermore rarely is any careful psychiatric evaluation made before the juvenile offender is returned to society. If all of these conditions were fulfilled, the present legislation would offer increased but still limited protection to the public against the sexual psychopath. The fact that a large number of sex crimes are committed by teen-age boys who may or may not have had a previous history of sexual delinquency requires a program which will include observation and treatment and a careful review of the entire case before release to the community. The temporary measure, as indicated in the case of Charlie (the second case discussed), serves no useful purpose. Such a program provides nothing constructive for the boy and he not infrequently leaves the institution to be a greater menace to society than he was before he entered.

Training schools throughout the country and correctional institutions have to accept whatever is sent to them by the courts — first offenders, chronic

*Continued on page XX*

offenders, mental defectives, intellectually superiors, psychotics, sane, dangerous and inoffensives. Little opportunity is provided for doing more than subordinating the group to rules and regulations carried out under severe disciplinary measures. Little effort is made to study, treat, and rehabilitate any particular individual.

The most progressive plan for dealing with juvenile delinquency and the one which offers the most hope for rehabilitating delinquents of all types and at the same time identifying the sexual psychopath is that outlined by the California Youth Authority. Under this plan, (1) every delinquent child committed to the state should be subjected to all the tests and examinations essential to making a diagnosis. (2) Facilities should be provided by the state in order that the recommendations resulting from such a study may be carried out with the particular type of treatment indicated. Different types of institutions should be designated for particular problems with reference to age. Present training schools, reformatories, county schools and truant schools could be utilized as a nucleus of such a program. This plan would give no assurance that all delinquents who are committed would be able to return to the community. Certain types of problems, such as the sexual psychopath, would require indefinite or perhaps permanent segregation. It would provide, however, the opportunity

for release after a careful review under adequate supervision of any individual considered a good risk.

Back of all legislation comes the influence of the home, school, church, and other community organizations as front line defense against delinquency. It is important to recognize these early manifestations of mental conflict at a time when the children are still plastic and suggestible, before they have become dependent upon the secondary gains which occur in relation to their asocial activity.

If it is accepted as a hypothesis that a predisposition toward a delinquent career can be recognized in certain children during the first decade, it can also be accepted as a fact that efforts to alter delinquent trends will be successful in direct relation to the time the asocial activity began and the time that intelligent therapeutic measures are instituted. The nearer to the source where the problem originated that therapy can be initiated, the more effective it is likely to be, and the less need there will be for the more complicated technique and long-time treatment.

1. Juvenile Court Statistics, 1927, United States Department of Labor, Children's Bureau.
2. Uniform Crime Reports, Federal Bureau of Investigation, United States Department of Justice.
3. Homicide among Children, by Ralph S. Banay, M. D., Federal Probation, Vol. II, No. 1, Jan.-Mar., 1947.
4. The Engrammes of Psychiatry, Neilsen, J. M., and Thompson, G. M., C. C. Thomas, 1947.

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FROM SECRETARY OF DEFENSE LOUIS JOHNSON—

# AN URGENT APPEAL TO YOUNG DOCTORS!



*Your personal help is needed to avert a serious threat to our national security!*

By the end of July of this year we will have lost almost one-third of the physicians and dentists now serving with our Armed Forces. Without an increased inflow of such personnel, the shortage will assume even more dangerous proportions by December of this year.

These losses are due to normal expiration of terms of service. The professional men who are leaving the Armed Forces during this critical period are doing so because they have fulfilled their duty-obligations and have earned the right to return to civilian practice.

Without sufficient replacements for these losses, we cannot continue to provide adequate medical and dental care for the almost 1,700,000 service men and women who are the backbone of our nation's defense.

## ***Normal procurement channels will not provide sufficient replacements!***

To alleviate this critical, impending shortage of professional manpower in the three services, I am urging all physicians and dentists who were trained under wartime A. S. T. P. and V-12 programs under government auspices or who were deferred in order to complete their training at personal expense, and who saw no active service, to volunteer for a two-year tour of active duty, at once!

We have written personally to more than 10,000 of you in the past weeks urging such action. The response to this appeal has not been encouraging, and our Armed Forces move rapidly toward a professional manpower crisis!

Many responses have been negative, but worse—a great number of doctors have not replied. It is urgent that we hear from you immediately!

*We feel certain that you recognize an obligation to your fellow men as well as to your profession in this matter. We are confident that you will fulfill that obligation in the spirit of public service that is a tradition with the physician and dentist.*

There is much to be said for a tour of duty with any of the Armed Forces. You will work and train with leading men of your professions. You will have access to abundant clinical material; have the best medical and dental facilities in which to practice. You will expand your whole concept of life through travel and practice in foreign lands. In many ways, a tour of service will be invaluable to you in later professional life!

*Volunteer now for active duty. You are urged to contact the Office of Secretary of Defense by collect wire immediately, signifying your acceptance and date of availability. Your services are badly needed. Will you offer them?*

*Louis Johnson*

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## INDUSTRIAL MEDICINE AT THE SACO-LOWELL SHOPS

FRANK W. BARDEN, M. D., Biddeford, Maine

In January of 1948, Saco-Lowell embarked upon a program of Industrial Medicine that is unique in this locality. Previous to this, Medical care was carried on by a part-time physician. With the Increasing of Plant personnel, it was felt that a more extensive plan of Medical care be instituted. At the present time, Medical care of the employees at Saco-Lowell Shops can be divided into two main groups: namely, In-Plant Medical care and Out-of-the-Plant care.

The "In-Plant" care of employees has been revamped during the last eighteen months so that we now have a very comprehensive Medical program. This program is related closely with the Safety Department and the Industrial Hygienist. The main-spring of the program is a well-staffed Hospital, a full-time Medical Director and the full coöperation of management.

The Medical and Surgical services to the employees embraces the following: First Aid treatment to all injured no matter how minor. Those cases requiring extensive Medical or Surgical work, and needing hospitalization over twenty-four hours, are taken to a local Hospital where the case is treated. Consultations are used whenever necessary. Hydro and Physio therapy are used following injuries that require this type of rehabilitation. Employees who become ill while on the job are given emergency treatment and then sent to their family physician for further care and follow-up. Employees who do not have a family physician are given a list of capable men to choose from and after their choice is made they are sent to the Doctor of their choice. Counseling of employees in regard to Medical problems is encouraged and it is surprising how much the Department is called upon for advice.

Physical examinations are of many different types. A comprehensive pre-placement physical examination is given to all prospective employees, as well as all employees returning to work from a siege of illness. The examination includes a physical; a laboratory examination which includes a urine analysis and microscopic examination; a blood specimen for Hinton; a white and red cell count; a differential if necessary; a hemoglobin and a blood typing with RH factor determination. The latter is done so that a potential blood supply is easily accessible when needed. This has proved to be a great help to the employees and their immediate families. All blood donor services are voluntary and if the donor is required to lose time from work he is reimbursed for the time lost by the Company. This is limited to a two-hour period under ordinary circumstances. A complete visual

evaluation test is done on the Ortho-rater, and if there is any indication for a chest picture, the employee is sent to the City Hospital for a 14 x 17 picture. It is planned that, as we go on, the Department will be fully equipped with a complete X-ray unit to do general diagnostic work as well as chest surveys.

Physical examinations of the executives and all supervisory employees has just been completed and is now an annual program. This examination is similar to the pre-placement physical, however, the man is advised of any physical findings and it is suggested that he see his own doctor for further follow-up. Records of our findings are gladly submitted to the family physician upon request.

Special physical examinations of selected groups such as crane operators, vehicle operators, elevator men, employees exposed to various toxic materials or dust (such as foundry workers) are done at periodic intervals.

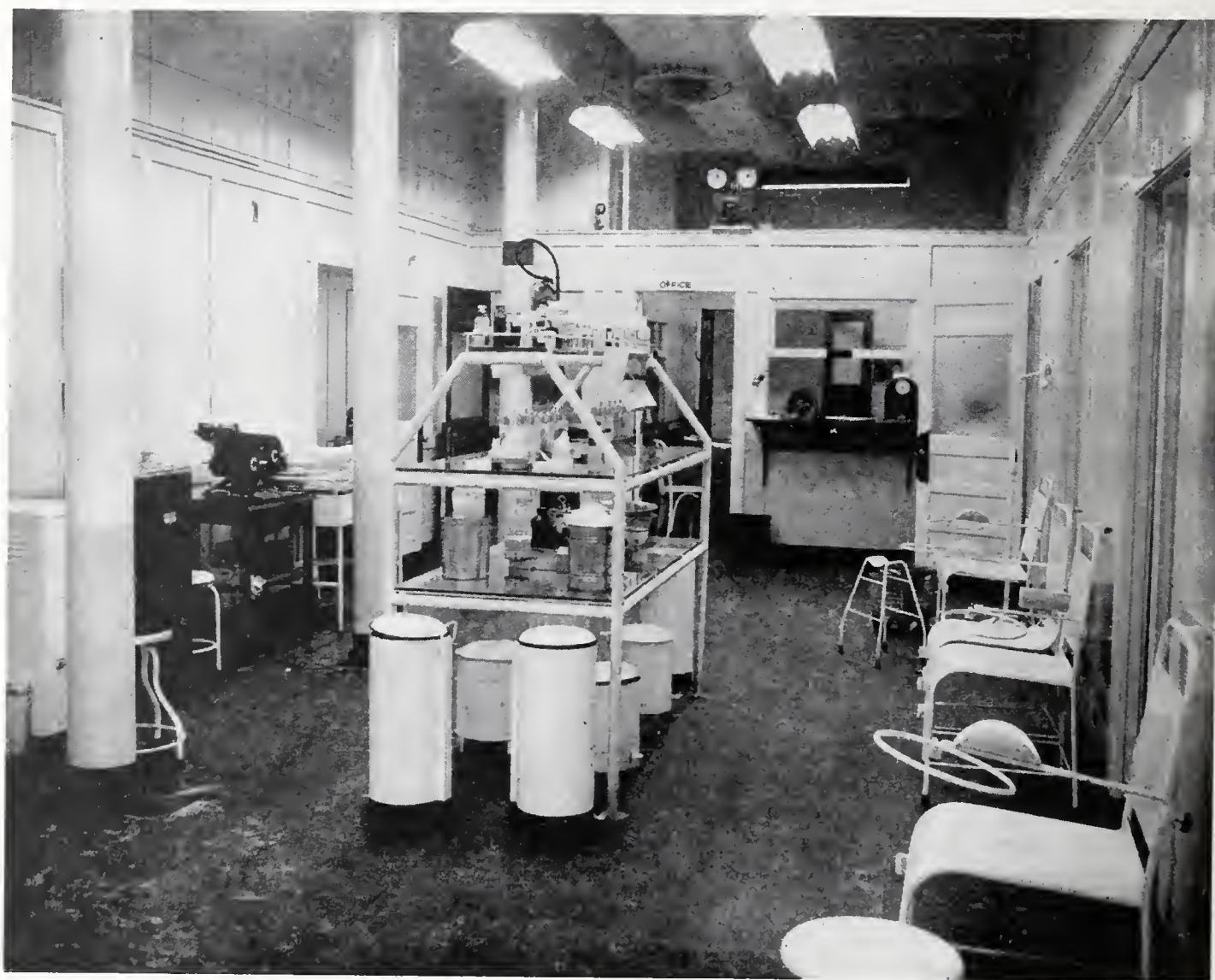
It is also planned that, in the near future, every employee over the age of 45 will receive a bi-annual examination and those found having a disability will be advised of their condition and examined more frequently.

The State Department of Health has coöperated with us in bringing a chest survey unit to the Plant every two years. This helps tie in with our own physical examinations.

These various physical examinations are well received by the employees. When they realize that the examinations are being done for their own good, and not to eliminate them from their jobs, they are very coöperative.

Medical supervision of the medically absent employee is quite extensive and is done with the viewpoint of controlling possible epidemics that might be brought into the Plant. In the care of an industrial accident, the employee is under constant supervision and unnecessary absenteeism is watched for. In the case of non-industrial illness—anyone that is absent for three days or more—and gives personal sickness or illness in the family as an excuse, is sent to the Medical Department before they are returned to work. We feel that this has certainly helped to control the spread of Colds. A man returning to work after three days, still having coryzal symptoms and running a temperature, would be sent back home and upon his return would have to come through the Medical Department before going back to his work. Last winter we had one case of a man returning to





This is the central Dispensary.

work who gave a history of Scarlet Fever in the family. We sent him back home for a few days of observation — the next day he was sick and found to have Scarlet Fever. There was no other case in the Plant, but indications are that, had he been allowed to work until he became acutely ill we would have had some cases, at least in his Department, which employs about one hundred thirty-five men.

The Medical Department participates in aiding the various Departments throughout the Plant in inter and intra departmental transfers. If, because of some disability, a man needs a transfer to another job or, upon transferring an employee to some other job, he claims disability rather than be transferred, the employee is sent to the Medical Department for a medical check-up. If indicated as advisable at the time of pre-placement physical examinations or other periodic examinations, the employee is restricted to the job he is going on and cannot be transferred without Medical Department approval.

In order that the proper placement of employees on the job is accomplished it is necessary that the

Medical Director spend a great deal of time out in the various Departments observing jobs and deciding what the physical requirements of a given job are. This is a very important part of Industrial Medicine. Too often, the employee will give the Doctor the wrong impression about the job he is doing, or the Doctor will jump at conclusions. There is no substitute for the actual observation of men performing their daily job requirements.

The employment of the physically handicapped has been encouraged whenever possible. There has been no attempt to make jobs for physically handicapped people, but if jobs are open that certain handicapped persons can do, an attempt is made to rehabilitate this person for this job. Their work record and performance is watched and their safety record carefully followed so that any chance of misplacing the man is followed up.

The Safety Section is in constant contact with the Medical Department. The cause of any and all serious accidents is investigated immediately. If necessary, the machine is stopped until a proper evaluation



of the accident can be made by the Supervisor, Safety Director and any other person directly associated with the job. By so doing, it can be ascertained whether the accident was caused by negligence on the part of the employee, faulty machinery, bad lighting or other causes. This program has been definitely helpful. In eighty percent of the cases the investigations show the operator to be at fault. Once the cause has been determined steps can be instituted to rectify the condition. Proof for this program is the fact that, during the nine months of our peak work load (July 1st, 1948, to April 1st, 1949), when employment was at its highest in the history of the Company, the accident frequency rate dropped twenty-two percent. Comparing our accident frequency average for 1948 with the National Figure for Manufacturers of Textile Machinery we found that for the entire Industry the rate is 11.7% while our figure was 4.48%. Comparing our Foundry figures with the National Average of 36.8% we show a 11.5% frequency.

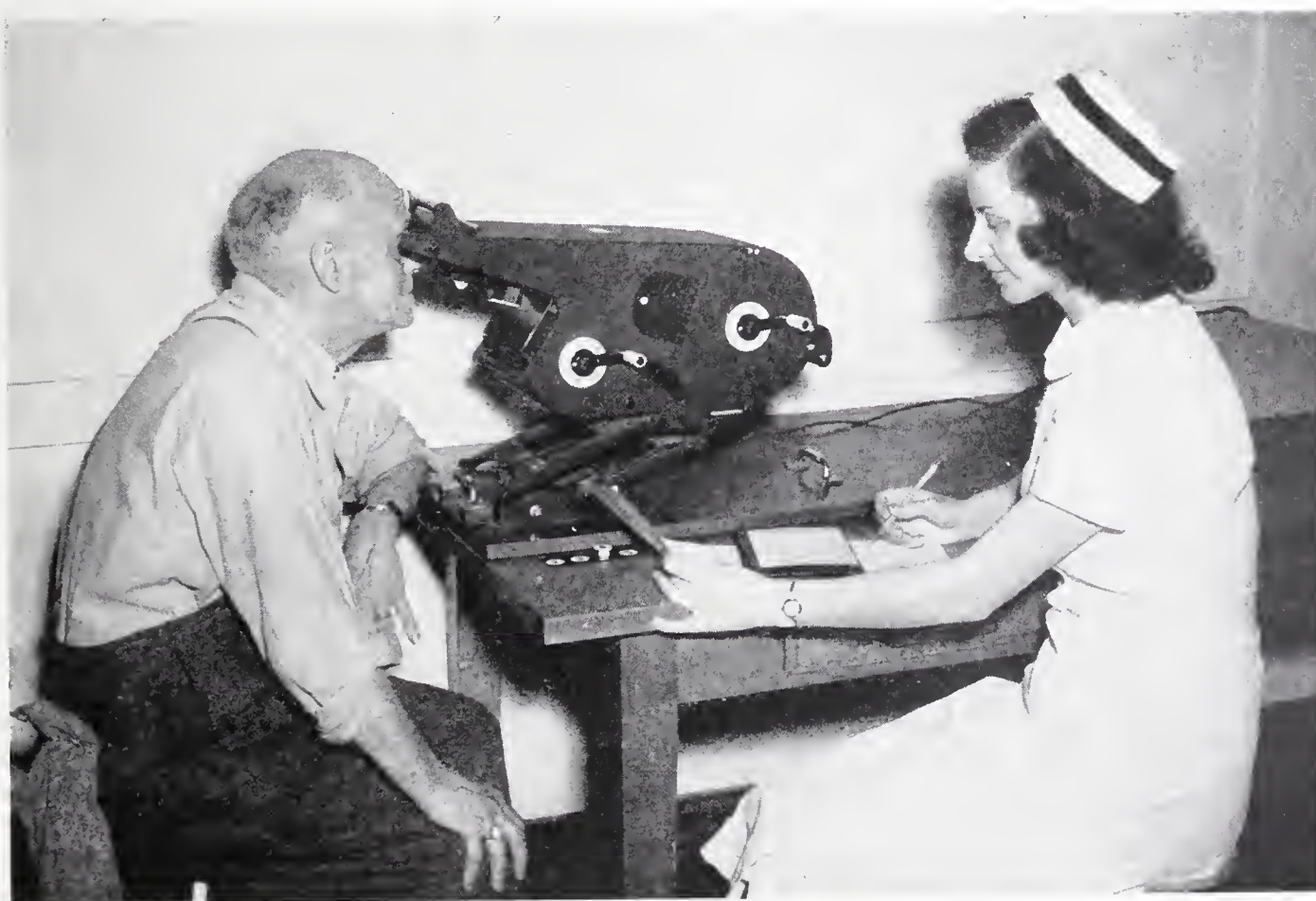
Since the beginning of the year we have had an Industrial Hygienist in our Plant. He works very closely with the Medical and Safety Departments. Marked improvement is being made in industrial hazards, and at the end of the year, we expect to

show major improvements in the control of these hazards.

There has been a very active program of Plant immunization for Virus A and B Influenza. This was done on a volunteer basis. Over 50% of the employees were immunized. As yet, our statistics on absenteeism for the past winter months has not been determined, but from our Hospital visits through the winter months it is evident that there were some worthwhile advantages gained.

There have been numerous visual surveys made throughout the different departments of the Plant. The Bausch and Lomb Ortho-rater was used and it was taken out into the various offices and departments for the surveys. These surveys have all shown about the same pattern indicating that approximately thirty-five to thirty-eight percent of the people need some type of eye care.

Good Medical care OUTSIDE THE PLANT for the employee has been made possible by the Company. A group hospitalization, accident and sickness policy is supplied to all employees without expense on the part of the individual; this program being instituted three years ago. The Insurance allows each employee thirty-one days in the Hospital at \$7.00 per



Doing visual testing throughout the Plant. The Ortho-rater is taken out into the various Departments when a request is made by the Foreman for a visual survey.





Giving influenza immunization out in the Plant. The Nurse is giving the vaccine while the Recorder gets the employee's name so that follow-up statistics can be compiled. This was a voluntary program with 50% of the employees responding.

day for any one Surgical or Medical condition. Incidentals, such as X-rays, drugs, etc., are covered up to \$50.00. Surgical allowances are on a set fee basis with \$150.00 the maximum. Medical fees are allowed up to \$150.00. While the employee is physically disabled he can receive \$20.00 per week for a period of thirteen weeks. If the man is laid off, his accident and sickness insurance covers him for thirty-one days. If he quits, or his employment terminates for some reason, his insurance stops the day he leaves the employ of the Company. In addition, there is a \$500.00 Life Insurance policy with a dismemberment clause and double indemnity clause for accidental death. This carries over for thirty-one days after termination of employment regardless of cause.

In 1947, it was found advisable to extend this type of Insurance to dependents of employees. In these cases the employee pays \$ .50 a week for one dependent and \$ .75 a week for two or more dependents. The coverage is not quite as liberal as in the case of the employee himself, but does allow set fees for hospitalization and Surgical benefits. There is no payment for disability claims while the dependent is ill. Life Insurance is not included for the dependent. Seventy-five percent of those eligible have taken advantage of this service.

The Medical Department is closely allied with the Insurance Section. Weekly conferences are held and all cases out on Insurance are scrutinized by the Medical Director. From this, valuable information as to the employees health is obtained and recorded in the Medical files. All cases are followed and often the family doctor is contacted by the Medical Director to obtain pertinent facts not disclosed on the Insurance blanks. All Medical records are confidential and are not open to inspection by anyone within the Company. Information on the employees health can only be given out with his consent and a signed release placed in the file.

Looking back we can see that there have been many strides made to better the health and welfare of the employee. What has been built up, has been done slowly and carefully, so that the entire program is on a firm foundation. However, looking forward, we see many more things that must be accomplished. These will take time to work out and put into operation.

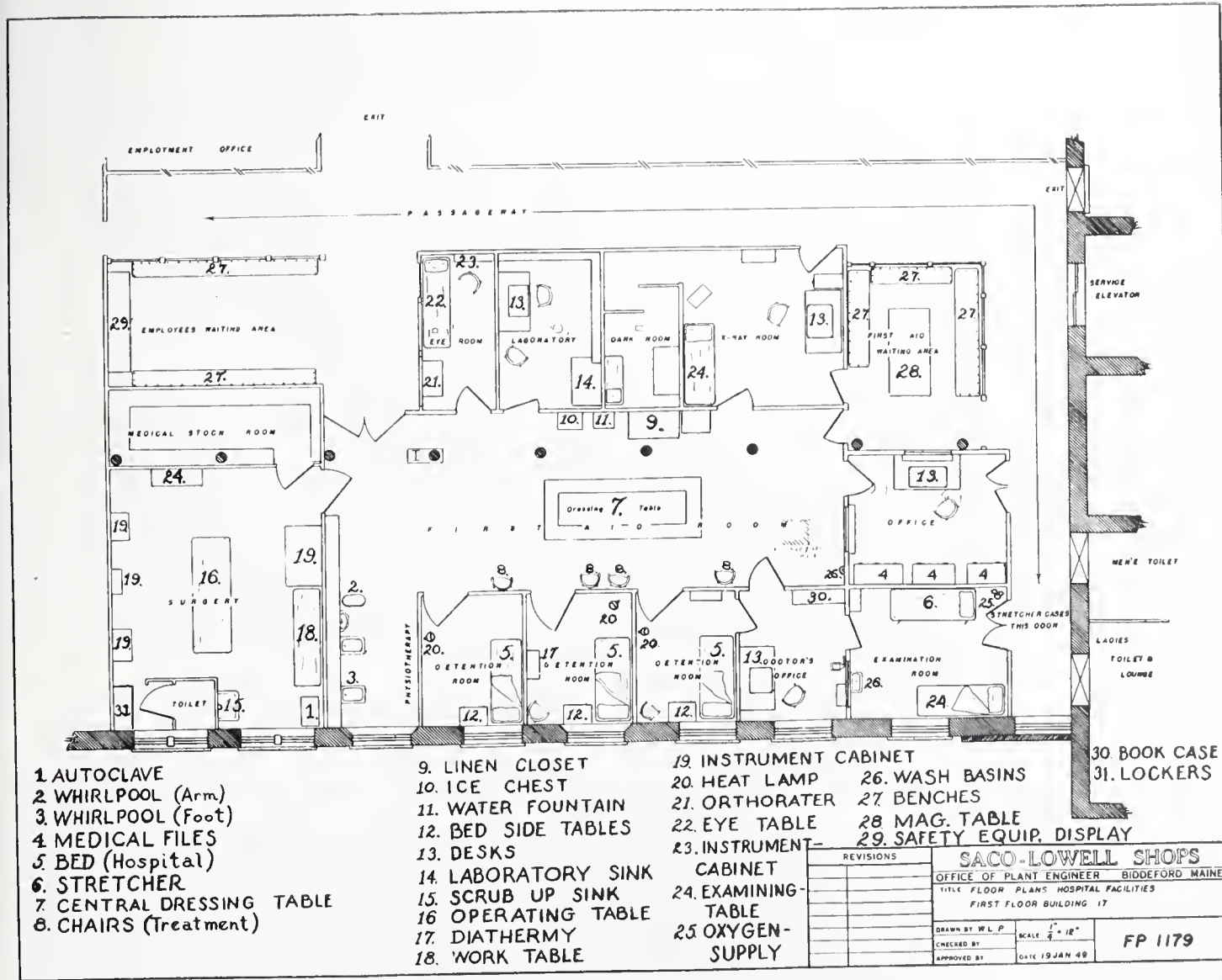
Establishing a program of this type, in a locality where Industrial Medicine is new, has been a very interesting experience. The importance of working with all levels in the industrial organization is manifested. The Medical Department must be in close

relationship with all sections of the Industrial Relations Department. The Employment Section, Safety, Labor Relations, Insurance, Job Classification and Evaluation are all closely knit to make the Medical Department function efficiently. Good relationship with the production side of the picture is essential with great emphasis put on closer functioning with the individual foreman or section leader.

Not only must the relationship of the Medical department within Industry be constantly considered, but also its relationship outside of Industry. Many of our own profession have little conception of what Industrial Medicine is. A good personal relationship with the Doctors outside is essential. Medical ethics must be scrupulously followed at all times. When misunderstandings do arise they should be straight-

ened out immediately. The acceptance of what Industrial Medicine is trying to do for the employee is paramount. As the program is progressing the profession is becoming more aware of the fact that, rather than encroaching on their field, we are helping to widen it by making better conditions for both the Doctor and his patients.

We have had disappointments going through this reorganization process — even discouragements. The one redeeming feature is that these experiences are decreasing. To say that they have been eliminated would be optimistic. However, we are on the right track, and as time goes by, Saco-Lowell Shops will have something that they and their employees can be justly proud of. Time alone will complete the story of Industrial Medicine at Saco-Lowell.



Floor plan of Plant Hospital.



## CLINICO-PATHOLOGICAL EXERCISE

## Case presented at Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

This 58-year-old white female was admitted to this hospital with the following chief complaints: (1) Swelling in the neck, 11 years' duration; (2) Difficulty in breathing; (3) Protrusion of the eyes; (4) Ulceration of the lower lids; (5) Dimming of vision. Patient first noticed swelling in her neck 11 years prior to admission, and six years later she was admitted to another hospital because of difficulty in breathing and cough of three months' duration. The following abstract of a discharge note at that time was received:

"This 58-year-old female entered the hospital because of difficulty in breathing and cough for the past three months. For the past five years, the patient has had an enlarged thyroid. During the past three months the gland enlarged rapidly, and was accompanied by progressively increasing difficulty in breathing. Physical examination revealed an enlarged thyroid. The laboratory examinations were non-contributory except for a large trace of albumin in the urine. The patient had a subtotal thyroidectomy; the pathological report stated that the gland showed malignancy. She responded well to treatment though transfusions and Digitalis therapy were necessary. She was advised to return for X-ray Therapy, but did not do so."

Shortly after her discharge from the hospital five years ago, the patient noticed that there was progressive swelling in the right side of her neck; she also had increasing exophthalmos. There had been increasing difficulty in vision for six months prior to admission, especially on the right. Three months prior to this admission the patient developed "water blisters under her eyes." There had been a gradual increase in the degree of dyspnea, which had become very severe in the three weeks prior to admission, and had been the reason for her seeking medical attention.

The patient had been admitted to another hospital a few weeks prior to this admission. The findings were essentially the same as made at this hospital with the addition of the following laboratory work: BMR plus 34%. Urinalysis showed a trace of albumin, abundant white cells; moderate number of bacteria. Total cholesterol 182 mg.%, total protein 6.4 gm.%, N.P.N. 35.5 mg.%, WBC 5,100; 49% polys; hemoglobin 17%. Kahn and Kline tests negative.

The past history was essentially as above. A systemic review of gastrointestinal system was negative. There had been no weight loss; in fact, the patient had gained 12 lbs. since her operation. Her appetite was good. There had been no diarrhea, and no blood

in the stools. The respiratory system was essentially as in the history. Cardiovascular system: patient had received Digitalis at the time of her previous admission. She had exertional dyspnea, mild orthopnea, and moderate swelling of the ankles at times. Her family history was negative.

Physical examination revealed a moderately obese white female in marked respiratory distress. Temperature 98 degrees; pulse 90; respirations 20; blood pressure 105/75. Eyes: there was marked ectropion and exophthalmos, with ulceration of the lower lids. There was also a moderate degree of edema of the eyelids. Ears, nose, and throat were essentially negative except that there were several carious teeth. Neck: there were fairly large, firm masses in both submaxillary regions, firmly fixed in the underlying tissues and skin. There was an old healed scar of a thyroidectomy. Lungs: both inspiratory and expiratory phases were prolonged. There were no rales. Heart: the rate was regular with no enlargement of heart noted, and no murmurs heard. Abdomen was negative. Rectal and vaginal examinations were deferred.

An X-ray of the chest taken five days after admission revealed the following: "There is scoliosis of the dorsal spine, with a convexity toward the right, and corresponding deviation of the trachea to the right, which, I believe, is entirely due to distortion of the spine, and not due to any intrathoracic pathology. There is a definite increased density involving the lower half of the left lung field, with the line extending up the periphery, which is characteristic of fluid. Besides this there is an area of increased density which consists of an extension outward from the left hilus region. The right lung field is clear, except for some extension of the right hilus.

Impression: Findings represent left hydrothorax, the cause of which is not positive from the X-ray findings. It could be due to metastatic malignancy, but there is nothing characteristic about it. The lateral view of the cervical spine shows that there is some increase in the retrotracheal space, anterior to the sixth cervical vertebra, which measures 16 mm. against a normal of 9 mm. This, in part, could be due to scoliosis of the cervical spine as described."

Laboratory work: WBC 7,200; neutrophils 65%; eosinophils 2%; lymphocytes 30%; monocytes 3%. Hemoglobin 61%; 8.8 gms. RBC showed slight variation in size. RBC—3.34 million; MCH 24; platelets normal. Blood chemistry: Cholesterol 135 mg.%; B.U.N. 15 mg.%; Urine: acid reaction; Sp.

Gr. 1.018; no albumin, sugar or bile; 4 plus acetone and diacetic acid; occasional rbc, 200 WBC with many small clumps, occasional epithelial cells; 2 plus bacteria. A B.M.R. was done at the time of admission and was plus 40%. Nine days after admission it was plus 45%. Kahn and Hinton were negative.

Electrocardiogram revealed the following: Rhythm — sinus tachycardia. Rate — auricular 108, ventricular 108; P.R. interval .16 seconds; QRS — 0.6 seconds, and low voltage; T wave low in T1 and 4, inverted in T2 and T3; St.: depressed, sagging, ST 1 and 2. Interpretation: abnormal form of ventricular complex, suggestive of coronary heart disease.

An eye consultant made the following note: "Eyes are fixed; there is inflammation of the conjunctivae, due to exposure of lids. There are several moveable masses felt through both upper and lower lids, probably swollen glands. The condition does not resemble exophthalmos due to thyrotoxicosis, also not at all typical of any malignancy. I have no explanation as I have never seen anything like it. Suggest biopsy of glands in lids and neck or of both."

The biopsy was taken. The surgical consultant made the following note: "Exophthalmos, swelling of lachrymal glands, parotid gland on the right, and both submaxillary glands; adenopathy of neck, obstruction of free breathing." Because of the severe dyspnea, which became progressively worse during the entire hospitalization, an E.N.T. consultation was requested. A laryngoscopic examination was performed, and the following note was made: "The trachea is compressed from without just below the vocal cords in the region of the thyroid."

The patient's course in the hospital was progressively downhill. She completed one X-ray treatment of 250R to the neck. The patient's respiratory difficulty became progressively more severe, and she expired on the 20th hospital day. Her temperature never rose above 100 degrees.

#### DISCUSSION

*Dr. Donald Daniels:* It seems to me that the summary brings out the following facts, a long story of a tumor of the neck involving the thyroid with evidence of thyrotoxicosis, and other signs of Graves disease, followed by a reasonably comfortable period after operation, then increasing dyspnea which remained the chief complaint and the cause of death. Along with that, the other essential points seem to be the pleural effusion, and a lesion in the left hilus or lung, acidosis, and some genito-urinary disease as evidenced by pyuria and albuminuria. I think the other findings are probably inconsequential to these things we have mentioned. We have to keep the thyroid disease as compatible with her whole course. If we consider a malignancy of the thyroid we must make a guess as to what that was. Since she had thyrotoxi-

cosis before, it would seem she had an adenomatous goiter which became malignant. Such a tumor is known to metastasize, by the blood to the lungs and bones and in a short time it might be in the lungs, but this patient went five years without any signs of that, which is against such a diagnosis. According to a current classification of malignant tumors of the thyroid, another type is the papillary carcinoma which recurs locally and is relatively benign, and may originate in lateral aberrant thyroid tissue. The swelling was in the right side of the neck, and that could be a tumor of the type just mentioned, since the course described in the physical examination is not too long, and it recurs locally and does not metastasize. I think that this might be the situation, and of the three types of thyroid malignancy, the adenomatous type would be more likely. Then, of course, of the other malignant tumors of the thyroid gland, there is the lymphosarcoma which has known properties of being rather slow in growing and responds to X-ray, and the patients usually survive longer — up to five years, but it involves the lymphoid tissue.

There seems to be three diagnostic possibilities: (1) Malignant tumor of the thyroid which could be papillary carcinoma which would recur locally in the other glands in the neck, and I had thought it probably recurred in the retrotracheal space; but we must in this event, find some other cause for the pleural effusion and shadow in her neck which we cannot do readily. (2) Malignant tumor of the thyroid (e.g. malignant adenoma), and what we see in the lungs probably represents that tumor having metastasized there. (3) Malignant tumor of any type which may have been cured by the previous operations, and this may be a different disease entirely.

It seems almost too easy to say that the whole thing is due to a recurrent thyroid tumor, but with the trend of evidence presented, it is difficult to get away from that fact, and the case is evidently a variation from the usual course of malignant thyroid disease. I think that I would favor a malignant tumor of the thyroid which did not metastasize to the lungs. The shadow in the retrotracheal space is a little puzzling, but so long as she could get air down the trachea, asphyxia was not the cause of her death. The acidosis, I presume, must be the result of continual dyspnea. The genitourinary disease, I do not know how to fit in, unless there is a malignant lesion in the kidney metastasizing to the lungs and causing the lung findings.

Final diagnosis is: Malignant tumor of the thyroid which metastasized, and with some local recurrence, although I cannot account for all the pathology. Death seems to have been one of respiratory failure.

*Dr. Saul R. Polisner:* I am impressed by the considerable degree of exophthalmos and severe chemosis present in this case. In a differential diagnosis, one must consider exophthalmos as seen in the thyro-



tropic type of Graves disease, and proptosis due to retrobulbar orbital tumor. In the latter condition, if one attempts to press the eyeball back into the orbit, a definite resistance is encountered. This is known as the resistance sign, and does not occur with the normal eye or in the thyrotoxic type of exophthalmos. Occasionally it is met in the thyrotropic form.

The immobility or fixation of the eyeballs here, I believe, is due to a mechanical factor, either edema or tumor. In cases of immobility due to massive ophthalmoplegia, the exophthalmos is much less than is seen in this case.

The visual impairment noted is probably due to optic nerve involvement, since no evidence of exposure keratitis is seen, and no mention is made of any fundal abnormality. An orbital tumor, therefore, seems to be the most likely possibility, and it must also extend back into the cranium to involve the cavernous sinus in order to produce the severe chemosis.

There are lymph spaces in the orbit but no true lymphatic nodes. Therefore, a tumor can gain entrance either by local extension or via the blood stream and usually to the choroid. However, in this case, I favor metastatic lesion to the orbit.

*Dr. Richard Goduti:* There are two possibilities: 1. The evidence of a post-operative thyroid exophthalmos which is due to thyrotropic factor from the pituitary, but the other thing that impressed me is that the lachrymal glands are involved, and it makes you think of Mickulicz's syndrome. Another thing is an atypical leukemia which gives you a lesion in the orbit, and the lids, and does go along with this picture. There are three considerations:

1. Exophthalmos of thyroid origin.
2. Mickulicz's syndrome.
3. Leukemia.

You should know if the eyes are proptosed forward or deviated.

*Dr. Eugene O'Donnell:* There are two or three things which are interesting — I agree with Mickulicz's syndrome. I think that one or two things to consider are, the fluid in the chest and how much congestion of the heart did the woman have. She had rales through both sides and fluid in the left base. I would not agree that you always get hyperthyroidism in the presence of carcinoma. These basal metabolisms that

were done, are of little value in the case of the congestive failure, and I would discount a plus 40 or a plus 45 which is also against a carcinoma of the thyroid. It is unusual for a woman to continue with a recurrent carcinoma of five years' duration.

*Dr. Porter:* Would anyone like to remark on the significance of basal metabolism in the presence of leukemia or other allied malignancies.

*Dr. Isaac Webber:* It would be elevated due to the lymphoma.

*Dr. Porter:* Acute leukemia will run a high metabolic rate.

*Dr. Goduti:* It could be a pseudo-tumor of the eyeball. They simply get a growth of lymph tissue, you can feel them along the rim of the orbit, and they are little tongues of tissue which persist. It is more like a granuloma of the lining of the lids.

*Dr. Ralf Martin:* Regarding congestive failure in the woman, we have very little evidence that she had congestive failure. The type of breathing is difficulty of expiration and inspiration which makes you believe it is obstructive. The fluid she has in one side of the chest is also against the congestive failure. If there is fluid in both pleural spaces, it is usually more on the right than on the left. The size of the heart was, as said in the physical examination, not enlarged and congestive failure rarely occurs in an enlarged heart.

*Dr. Porter:* What is your diagnosis?

*Dr. Ralf Martin:* Mickulicz's syndrome.

*Dr. Porter:* Our diagnosis at autopsy was malignant lymphoma which had involved the retro-orbital tissues. There was a mass of milky-white tissue behind the orbit, and extending back into the cranium. Both submaxillary glands, and both lungs showed metastasis. She had metastasis to her spleen, liver, and both kidneys. The thyroid gland was normal and showed no evidences of malignancy. The metastatic lesions in the kidney probably accounts for the hematuria. She also showed extensive infiltration about the larynx and upper trachea. Microscopic study of the larynx and trachea revealed a fairly diffuse growth of tumor in the submucosa.

Although there is a terminal bronchopneumonia, I believe the cause of her respiratory difficulty was the very extensive neoplastic involvement of her larynx, which resulted in a very pronounced narrowing of the airway.



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RALPH A. GOODWIN, M. D.  
*President, Maine Medical Association*  
1949 - 1950



**RALPH A. GOODWIN, M. D.****President, Maine Medical Association****1949 - 1950**

Ralph A. Goodwin, M. D., of Auburn, assumed his duties as President of the Maine Medical Association, Tuesday evening, June 21, at Poland Spring, Maine, as the last official business of the 95th annual session.

Doctor Goodwin was born in Danforth, Maine, December 13, 1884. He was graduated from Bates College in 1908, and from Harvard Medical School in 1913. He has practiced medicine in Auburn since 1916.

He has been a member of the Surgical Staff of the Central Maine General Hospital since 1920, and has served as physician to Bates College for twenty-six years.

Doctor Goodwin is a Fellow of the American College of Surgeons, a Fellow of the American Medical Association, a member of the Maine Medical Association, and a member and Past President of the Androscoggin County Medical Society. He served as Councilor for the First District of the Maine Medical Association for three years, the last of these as Chairman.

He is a Past President of the Auburn-Lewiston Kiwanis Club.

The Association, with its existing program, is indeed fortunate to have as its President, a man of Doctor Goodwin's ability.

## Maine Medical Association Officers Elected

at the  
95th ANNUAL SESSION

POLAND SPRING

JUNE 19, 20, 21, 1949



FOSTER C. SMALL, M. D., Belfast  
*President-elect*



C. HAROLD JAMESON, M. D., Rockland  
*Council Chairman, 1949-1950*

### COUNCILORS

#### FOURTH DISTRICT:

RAYMOND L. TORREY, M. D., Searsport  
1950

#### FIFTH DISTRICT:

RAYMOND E. WEYMOUTH, M. D., Bar Harbor  
1952

#### SIXTH DISTRICT:

NORMAN H. NICKERSON, M. D., Greenville  
1952



NORMAN H. NICKERSON, M. D.  
*Councilor*



## THE PRESIDENT'S PAGE

I wish to take this opportunity to thank each member of the Maine Medical Association for the high honor you have conferred upon me as President of this Association.

With your coöperation I feel that we can have a successful year and carry on from the groundwork which has been so efficiently initiated.

The Maine Medical Association is entering upon its 91th year. In previous years the objects of the Association, other than scientific programs have been chiefly local in character. However, this year, with the advent of the United States administration into the affairs of medicine the objects and issues become national in scope.

With our acceptance of A. M. A.'s program of National Education and opposition to the Compulsory Health Insurance Plan, we have a definite concrete objective. The immediate question is how best can we as individuals aid this program especially in the next few months.

This issue no doubt will be settled in Congress. Each Senator and Congressman will be guided to a great extent by the opinions of his constituents. Our task then is to let each Senator and Representative from Maine know immediately how we feel regarding the Compulsory Health Bill.

A program carried out by another New England state proved very valuable. The idea was as follows:

1st. Each doctor in the state wrote a personal, preferably long hand, letter to the Senator and Representatives.

2nd. He then talked with at least ten of his patients asking them also to write a letter and he gave them the Washington address of the two Senators and the Representatives from his district on a slip of paper. In this State 1,000 letters were sent within a few weeks and a Senator from that State in his return correspondence claimed it was very effective in deciding how they would vote.

Seven hundred and fifty-one Doctors from the State of Maine sending in letters and ten of their patients sending letters would make a total of 8,261 letters to Washington from Maine.

Let's try it. It is not a difficult task and might prove very effective.

RALPH A. GOODWIN, M. D.,  
*President, Maine Medical Association.*

# EDITORIAL

## It Happened in June at the Ninety-Fifth Annual Session

The Ninety-Fifth Annual Session of the Maine Medical Association, held at Poland Spring, Sunday, Monday and Tuesday, June 19, 20 and 21, 1949, writes "finis" to another year in the Association's History.

It was a most successful meeting; scientifically the program offered all that could be desired—socially it was "tops." There was a total registration of 565, which included 274 members.

The Specialty Conferences sandwiched in between the General Sessions provided food for thought for the specialists not too interested in a program specifically planned for the general practitioner. Comments from numerous sources are definitely in favor of this type of program.

### THE HOUSE OF DELEGATES

As the House of Delegates is the Legislative Body of the Association, I feel that the Highlights of its meetings should be given space priority in the Editorial in this issue of the JOURNAL.

The First Meeting of the House of Delegates, which officially opened the session, was called to order at 3.15 P. M., June 19, by Dr. Ralph A. Goodwin, President-elect, thirty-four of the thirty-five county delegates responded to the Roll Call. The Second Meeting was called to order by Dr. Goodwin, at 5.00 P. M., Monday, June 20, with twenty-seven delegates present.

A Reference Committee was appointed, consisting of Dr. Foster C. Small, Chairman; Dr. P. L. B. Ebbett, Dr. Franklin F. Ferguson, Dr. Charles W. Kinghorn, Dr. Frank A. Smith, and Dr. James A. Crowe.

A Nominating Committee was appointed to draw up a slate of Standing Committee members for 1949-1950. (This committee and their report as presented and approved will be found on page 194.)

The Council Report for 1948-1949 as presented by the Chairman, Dr. C. Harold Jameson, was approved, as was the Council recommended Budget for 1949-1950, which follows:

Secretary-Treasurer's Office:	
President's Expenses .....	\$ 350.00
Salaries:	
Secretary-Treasurer, Editor .....	4,500.00
Assistant Secretary .....	3,000.00
Expenses:	
Secretary-Treasurer .....	200.00
Office .....	1,200.00
Committees:	
Medical Advisory .....	1,000.00
Graduate Education .....	100.00
Special .....	500.00
Delegates (to New England Medical Societies) and Council .....	500.00
Delegate, American Medical Association .....	700.00
Clinical Session, Maine Medical Association .....	300.00
Council, New England State Medical Societies .....	100.00
Health Council of Maine .....	300.00
	<hr/>
	\$12,750.00
Executive Secretary:	
Salary .....	7,000.00
Secretary, Travel, and Office Expenses .....	5,500.00
	<hr/>
	\$25,250.00

It was voted to amend Article IV of the Constitution of the Maine Medical Association by adding at the end thereof the following:

And when recommended by his County Society any member in good standing who has attained the age of seventy may, by vote of the House of Delegates, become a senior member of the Association without further payment of dues, and without loss of any of the rights and privileges as members.

A Committee on Resolutions, consisting of Dr. Foster C. Small, Chairman; Dr. P. L. B. Ebbett, Dr. Wedgwood P.

Webber, and Dr. Frank A. Smith, was appointed to draw up a resolution endorsing the American Medical Association's Health Program, to be sent to the President of the United States, and to the Senators and Representatives from Maine. The resolution, which follows, was approved.

The Maine Medical Association in Annual Session convened does hereby unanimously

Resolve, That it does approve and endorse the twelve-point program of the American Medical Association for the improvement of the health of the American people and for the betterment of the distribution of medical care by voluntary and cooperative means in keeping with the American way of life and a free enterprise system, and the Maine Medical Association does further unanimously

Resolve, That it does vigorously oppose Compulsory Health Insurance as a long stride away from the American System of Government toward a socialized society and further because it would foist upon the people an inferior system of medical care at a greatly increased cost and a staggering tax burden upon the people, and the Maine Medical Association does further

Resolve, That this representation of opposition to a compulsory system of government medicine be made known to the President of the United States and to the Senators and Representatives in the Congress from Maine, by sending each of them a copy hereoff.

On the recommendation of the Reference Committee it was voted that there be a meeting of the House of Delegates at the Fall Clinical Session, and also one the following April, and that each component county society elect their delegates on or before January 31st of the year.

Dr. Raymond E. Weymouth of Bar Harbor, was elected Councilor for the Fifth District, and Dr. Norman H. Nickerson of Greenville, Councilor for the Sixth District. Dr. Raymond L. Torrey of Searsport, was elected Councilor for the Fourth District to fill Dr. Small's unexpired term.

The recommendations made by Dr. Stephen A. Cobb, Chairman of the Committee to Study the Revision of the Constitution and By-Laws of the Maine Medical Association, which follow, were approved.

First, that the Constitution of this Association be repealed.

Second, that this Association incorporate as a non-profit corporation, under the General Laws of the State of Maine.

Dr. Cobb explained that an acceptance of the Committee's report does not do anything except to put the two recommendations in order for action next year, at which time the House of Delegates may accept or reject this program. He stated that, during the year, a carefully prepared set of by-laws for the organization will be drawn and printed in the JOURNAL, and a copy sent to each member at least four months prior to the next annual meeting.

The Stenographic Report of the meetings of the House of Delegates will be published in part in future issues of the JOURNAL, and will include the Report of the Delegate to the American Medical Association, reports of Delegates to the New England Medical Societies, the report of the Executive Secretary, reports of various Committee Chairmen not published in the June issue of the JOURNAL, and the remarks of Mr. Lawrence Rember, Assistant Secretary of Public Relations of the American Medical Association.

### ELECTION OF PRESIDENT-ELECT

Dr. Foster C. Small of Belfast was unanimously elected President-elect of the Maine Medical Association, Monday, June 20, at the close of the first General Assembly.

Dr. Small, who has served as Councilor for the Fourth District for two years, was graduated from the University of Vermont Medical School in 1912, and has practiced medicine in Belfast since that time. He has served as Mayor of Belfast for several terms.

In his service to the Association as Councilor and as Chairman of our Reference Committee a year ago, he has proved his ability to fill the position he now holds.



## STANDING COMMITTEES

1949 - 1950

The Standing Committees for 1949-1950 were drawn up by the Nominating Committee, consisting of one delegate from each Councilor District, and accepted at the Second Meeting of the House of Delegates at the 93th Annual Session of the Maine Medical Association at Poland Spring, Maine, June 20, 1949.

### NOMINATING COMMITTEE

*First District*, JAMES M. PARKER, M. D.  
*Second District*, DELBERT M. STEWART, M. D., *Chairman*.  
*Third District*, ROBERT W. BELKNAP, M. D.  
*Fourth District*, CHARLES E. TOWNE, M. D.  
*Fifth District*, JAMES H. CROWE, M. D.  
*Sixth District*, CLYDE I. SWETT, M. D.

### Scientific Committee

Carl E. Richards, M. D., Sanford, Chairman  
 Franklin F. Ferguson, M. D., Portland  
 Clement S. Dwyer, M. D., Bangor  
 Loring W. Pratt, M. D., Waterville  
 The Secretary, ex-officio

### Committee on Medical Education and Hospitals

Richard S. Hawkes, M. D., Portland, Chairman  
 Waldo A. Clapp, M. D., Lewiston  
 Clyde I. Swett, M. D., Island Falls  
 Gilmore W. Soule, M. D., Rockland  
 Virginia C. Hamilton, M. D., Bath  
 The Secretary, ex-officio

### Medical Advisory Committee

Allan Woodcock, M. D., Bangor, Chairman  
 Carl M. Robinson, M. D., Portland  
 Frank A. Smith, M. D., Westbrook  
 Philip L. Gray, M. D., South Brooksville  
 Thomas A. Martin, M. D., Portland  
 Oscar F. Larson, M. D., Machias  
 Gerald H. Donahue, M. D., Presque Isle  
 The Secretary, ex-officio

### Public Relations Committee

Frederick T. Hill, Waterville, Chairman  
 Irving I. Goodof, M. D., Lewiston  
 M. Tietche Shelton, M. D., Augusta  
 Warren E. Kershner, M. D., Bath  
 Theodore C. Bramhall, M. D., Portland  
 The Secretary, ex-officio

### Cancer Committee

Magnus F. Ridlon, M. D., Bangor, Chairman  
 Forrest B. Ames, M. D., Bangor  
 Joseph E. Porter, M. D., Portland  
 Romeo A. Beliveau, M. D., Lewiston  
 John F. Reynolds, M. D., Waterville  
 Gordon N. Johnson, M. D., Houlton  
 The Secretary, ex-officio

### Committee on Social Hygiene

Oscar R. Johnson, M. D., Portland, Chairman  
 Donald L. Anderson, M. D., Lewiston  
 Carl E. Blaisdell, M. D., Bangor  
 Harold W. Stanwood, M. D., Rumford  
 The Secretary, ex-officio

### Publicity Committee

Frederick R. Carter, M. D., Portland, Chairman  
 President, Ralph A. Goodwin, M. D., Auburn  
 President-elect, Foster C. Small, M. D., Belfast

### Legislative Committee\*

P. L. B. Ebbett, M. D., Houlton, Chairman  
 James H. Crowe, M. D., Ellsworth  
 Roland L. McKay, M. D., Augusta  
 Francis A. Winchenbach, M. D., Bath  
 Charles W. Kinghorn, M. D., Kittery  
 W. Mayo Payson, Portland, Clerk  
 The Secretary, ex-officio  
 \* Appointed by the President.

## SPECIAL COMMITTEES

1949 - 1950

The following Special Committees for 1949-1950 were appointed by the President,  
Ralph A. Goodwin, M. D., of Auburn.

**Committee on Graduate Education**

Joseph E. Porter, M. D., Portland, Chairman  
William V. Cox, M. D., Auburn  
George L. Maltby, M. D., Portland  
Magnus F. Ridlon, M. D., Bangor  
George E. Young, M. D., Skowhegan  
Wilfrid J. Comean, M. D., Bangor  
M. Tieche Shelton, M. D., Augusta

**Tuberculosis Committee**

Loren F. Carter, M. D., Presque Isle, Chairman  
Walter R. Gumprecht, M. D., Bangor  
Francis J. Welch, M. D., Portland  
Lester Adams, M. D., Hebron  
George E. Young, M. D., Skowhegan  
Rufus E. Stetson, M. D., Damariscotta  
Edward A. Greco, M. D., Portland  
Dean H. Fisher, M. D., Augusta

**Committee on Maternal and Child Welfare**

Thomas A. Foster, M. D., Portland, Chairman  
Clair S. Bauman, M. D., Waterville  
Leroy C. Gross, M. D., Auburn  
Alice A. S. Whittier, M. D., Portland  
Virginia C. Hamilton, M. D., Bath  
Theodore M. Stevens, M. D., Portland

**Committee on Industrial Health**

Merrill S. F. Greene, M. D., Lewiston, Chairman  
Edwin M. Fuller, M. D., Bath  
Allan Woodcock, M. D., Bangor  
Ernest T. Young, M. D., Millinocket  
Albert P. Royal, M. D., Rumford  
Albert C. Todd, M. D., Brewer

**Committee on Conservation of Vision**

Howard F. Hill, M. D., Waterville, Chairman  
S. Judd Beach, M. D., Portland  
Dexter J. Clough, 2nd, M. D., Bangor  
Warren E. Kershner, M. D., Bath  
William R. McAdams, M. D., Portland

**Amy W. Pinkham Fund Committee**

P. L. B. Ebbett, M. D., Houlton, Chairman  
Virginia C. Hamilton, M. D., Bath  
Albert M. Carde, M. D., Milo  
Clair S. Bauman, M. D., Waterville  
Ella Langer, M. D., Augusta  
Thomas A. Foster, M. D., Portland  
Norman H. Nickerson, M. D., Greenville

**Committee on Civilian Medical Defense**

Charles W. Steele, M. D., Lewiston, Chairman  
Ralph A. Getchell, M. D., Portland  
Harry Butler, M. D., Bangor

**Veterans' Affairs Committee**

Harold E. Pressey, M. D., Bangor, Chairman  
Elton R. Blaisdell, M. D., Portland  
Currier C. Weymouth, M. D., Farmington  
Francis A. Winchenbach, M. D., Bath  
Edward H. Risley, M. D., Waterville  
Philip O. Gregory, M. D., Boothbay Harbor

**Health Insurance Committee**

Eugene H. Drake, M. D., Portland, Chairman  
Clyde I. Swett, M. D., Island Falls  
Frank A. Smith, M. D., Westbrook  
Theodore C. Bramhall, M. D., Portland  
Eugene E. O'Donnell, M. D., Portland  
M. Tieche Shelton, M. D., Augusta  
W. Mayo Payson, Executive Secretary, Clerk

**Committee on Rural Health**

Norman H. Nickerson, M. D., Greenville, Chairman  
Harry Brinkman, M. D., Farmington  
Stanley R. Lenfest, M. D., Waldoboro  
Wallace E. Viles, M. D., Turner  
Storer W. Boone, M. D., Presque Isle  
Harvey C. Bundy, M. D., Milo  
W. Mayo Payson, Executive Secretary, Clerk

**Committee to Supervise Training of Nurses' Attendants**

Clyde I. Swett, M. D., Island Falls, Chairman  
Foster C. Small, M. D., Belfast  
Frank A. Smith, M. D., Westbrook  
Currier C. Weymouth, M. D., Farmington  
C. Harold Jameson, M. D., Rockland  
W. Mayo Payson, Executive Secretary, Clerk

**Committee on Blood Transfusions**

Richard C. Wadsworth, M. D., Bangor, Chairman  
Joseph E. Porter, M. D., Portland  
Gilbert Clapperton, M. D., Lewiston  
Joseph A. Donovan, M. D., Houlton  
John F. Reynolds, M. D., Waterville

**Committee to Study Revision of Constitution and By-Laws**

Stephen A. Cobb, M. D., Sanford, Chairman  
Ralph A. Goodwin, M. D., Auburn  
Eugene E. O'Donnell, M. D., Portland  
Ralph C. Stuart, M. D., Guilford  
Forrest B. Ames, M. D., Bangor  
W. Mayo Payson, Executive Secretary, Clerk

**Committee for National Education Campaign**

Martyn A. Vickers, M. D., Bangor, Chairman  
W. Mayo Payson, Portland, Secretary

Representing the County Medical Societies:  
*Androscoggin:*

Paul R. Chevalier, M. D., Lewiston  
Irving I. Goodof, M. D., Lewiston  
Michael J. Harkins, M. D., Lewiston

*Aroostook:*

Armand Albert, M. D., Van Buren  
Gerald H. Donahue, M. D., Presque Isle  
Gordon N. Johnson, M. D., Houlton

*Cumberland:*

Theodore C. Bramhall, M. D., Portland  
Ervin A. Center, M. D., Steep Falls  
George L. Maltby, M. D., Portland  
Donald F. Marshall, M. D., Portland



*Franklin:*

Maynard B. Colley, M. D., Wilton  
 Charles W. Eastman, M. D., Livermore Falls  
 Currier C. Weymouth, M. D., Farmington

*Hancock:*

Silas A. Coffin, M. D., Bar Harbor  
 Charles M. Sumner, M. D., West Sullivan  
 Marcus A. Torrey, M. D., Ellsworth

*Kennebec:*

Frank B. Bull, M. D., Gardiner  
 Thomas F. Fay, M. D., Augusta  
 Frederick T. Hill, M. D., Waterville  
 M. Tieche Shelton, M. D., Augusta

*Knox:*

Paul A. Millington, M. D., Camden  
 Gilmore W. Soule, M. D., Rockland  
 Wesley N. Wasgatt, M. D., Rockland

*Lincoln-Sagadahoc:*

Robert W. Belknap, M. D., Damariscotta  
 Warren E. Kershner, M. D., Bath  
 Francis A. Winchenbach, M. D., Bath

*Oxford:*

Garfield G. Defoe, M. D., Dixfield  
 Henry M. Howard, M. D., Rumford  
 John A. Matheson, M. D., Bethel

*Penobscot:*

Paul W. Burke, M. D., Newport  
 Wilfred I. Butterfield, M. D., Lincoln  
 Herbert T. Clough, Jr., M. D., Bangor  
 Martyn A. Vickers, M. D., Bangor

*Piscataquis:*

Guy E. Dore, M. D., Guilford  
 George C. Howard, M. D., Guilford

*Somerset:*

Maurice E. Lord, M. D., Skowhegan  
 George E. Sullivan, M. D., Bingham

*Waldo:*

Richard P. Jones, M. D., Belfast  
 Seth H. Read, M. D., Belfast

*Washington:*

Norman E. Cobb, M. D., Calais  
 Oscar F. Larson, M. D., Machias  
 H. John Young, M. D., Jonesport

*York:*

William F. Mahaney, M. D., Saco  
 James H. Macdonald, M. D., Springvale  
 Carl E. Richards, M. D., Sanford

Representing the Maine Dental Society:  
 Dr. Alonzo H. Garcelon, Augusta  
 Dr. Frank P. Gilley, Bangor

Representing the Maine Pharmaceutical Association:  
 Mr. Harold Owen, President, Milo  
 Mr. Francis A. Frawley, Executive Secretary, Bangor

### Woman's Auxiliary to the Maine Medical Association Organized at 95th Annual Session

The Woman's Auxiliary to the Maine Medical Association was organized at a meeting held at Poland Spring, Maine, June 20, 1949, at 2:30 P. M., with a charter membership of 44.

Forrest B. Ames, M. D., of Bangor, retiring President of the Maine Medical Association, presided at the meeting.

A nominating committee consisting of the President and two delegates from each organized county auxiliary, presented a slate of officers for the coming year, and the following officers were duly elected:

President, Mrs. Charles W. Steele, Lewiston.  
 President-elect, Mrs. Edward W. Holland, Sanford.  
 Vice President, Mrs. Dexter J. Clough, 2nd, Bangor.  
 Recording Secretary, Mrs. Ralph C. Stuart, Guilford.  
 Treasurer, Mrs. Norman E. Cobb, Calais.  
 Corresponding Secretary, Mrs. Merton N. Flanders, Lewiston.  
 Organization Chairman, Mrs. Holland.  
 Program Chairman, Mrs. Martyn A. Vickers, Bangor.  
 Legislation Chairman, Mrs. Clough.

Public Relations Chairman, Mrs. Ralph A. Goodwin, Sr., Auburn.

Literature and Hygeia Chairman, Mrs. Clyde I. Swett, Island Falls.

Press and Publicity Chairman, Mrs. Stephen A. Cobb, Sanford.

Reports were read by the following members of organized county auxiliaries: Mrs. Ralph A. Goodwin, Sr., Auburn, Androscoggin County; Mrs. Carl E. Richards, Sanford, York County; Mrs. Ernest T. Young, Millinocket, Penobscot County; Mrs. Ralph C. Stuart, Guilford, Piscataquis County; Mrs. Clyde I. Swett, Island Falls, Aroostook County; and Mrs. Norman E. Cobb, Calais, Washington County.

Mrs. Merrill S. F. Greene, Lewiston, read the State By-Laws and Constitution, which were amended and voted upon. Forty-four charter members signed their acceptance of the By-Laws and Constitution as amended.

Mrs. Thomas Reed, President-elect of the New Hampshire State Auxiliary, reported on the organization and activities of that group.

Mr. Lawrence Rember, Assistant Secretary for Public Relations of the American Medical Association, spoke briefly.

## NECROLOGY



**James S. Sturtevant, M. D.**

**1858 - 1949**

At Dixfield, Maine, on Sunday evening, May 22, 1949, there passed away the Dean of the medical profession of Oxford County in the person of James Seldon Sturtevant, M. D., after a lifetime of active achievement which spanned almost a century.

The late Dr. Sturtevant was born at Hebron, Maine, September 9, 1858. His early education was acquired in the schools of his natal village, completing his academic training at Hebron and Bridgton Academies. In 1884, he received his Doctor of Medicine degree from the medical department of Bowdoin College, and within a few months he located in Scarborough, Maine, to practise with his uncle, Dr. Joseph Sturtevant. In the same year, he married Miss Celia H. Wing from North Livermore, Maine, who was then teaching school, and throughout the sixty-five years of their wedded life, Mrs. Sturtevant has been an example of wifely devotion, with a loving solicitude for her husband's personal and professional welfare, rarely equalled, never surpassed and challenging emulation. To them were born two children, Dr. James M. Sturtevant, Pediatrician, New London, Conn., and Mrs. Blandine (Oscar) Brendenberg, Champlain, N. Y. In 1885, he moved to Dixfield and practised in that territory up to the closing days of his career. In 1934, he was decorated with the gold medal, emblematic of fifty years' service as a practising physician, by the Maine Medical Association, and this June he would have been eligible for the third bar in token of sixty-five years since graduation.

To a young man in the field of medicine today, a review

of the achievements in medical progress encompassed in the era of Dr. Sturtevant's labors must seem almost like reaching back to the age of fable. In 1890 and again in 1895, he interrupted his practice to attend the New York Post-Graduate Medical School and Hospital, to acquaint himself with the newer knowledge of medical technique, and on his return was one of the first to introduce to this area the practical application of asepsis, the theory of which was even then in the controversial state. To go from this through the multiple advances to the present status of diagnostic, prophylactic and therapeutic efficiency would fill a volume as enchanting as the Arabian Nights.

His horse and buggy days were also typhoid fever days, and one year, from May to October, he treated forty-seven patients for this disease, driving a distance of twelve miles in many instances to do so, and doing this many times twice a day. He delivered over fourteen hundred babies, not one of whom was born in a hospital. With no bridge across the Androscoggin River above Gilbertville, a ferry in the summer and ice in the winter aided transportation, but the early spring and late fall presented travel problems fraught with danger. His escapade of crossing the river on foot in the inky darkness of 2 A. M., pushing his bags ahead on the weakened ice by means of a long pole, to distribute weight, and to find at 6 A. M. the river completely free of ice, was only one of many incidents common to his professional life in those days, to test his courage and resourcefulness. Up to the last he never lost interest in the profession and remained actively alert to oppose any development which might jeopardize the goal of medical effort. Only three nights before his death, in conversation with him, he asked the writer what I thought of the proposed "Socialized Medicine Scheme." I was amazed to learn from him that he had written the President of the United States, each Senator, Congressman and Congresswoman from Maine, stating his opinion against the proposal, and had received acknowledgements from all.

He loved the varying beauty of his native hills and mountains, and the tediousness of the long horse-drawn carriage trips in the days before automobiles was frequently dispelled by his fondness for birds, the habits and songs of which he knew intimately.

He had a fine, subtle sense of humor and enjoyed a witty anecdote. On one occasion, some hours after he had delivered a baby, the parents and one or two of the neighboring women became alarmed because the infant had not voided. After some deliberation they decided to call the doctor and ask what they should give the baby. With characteristic eloquent brevity, he replied, "I think you better give him time."

His genial handshake and spontaneous friendliness will be missed by his colleagues whenever and wherever we assemble, and to Mrs. Sturtevant, Dr. James M. and Mrs. Brendenberg, we tender our heartfelt sympathy at the passing of an exemplary husband, a devoted father and a physician without reproach.

He was a member of Tuscan Lodge, I. O. O. F., a charter member of Metalluck Lodge, Knights of Pythias, and in the Masonic Order, he was a member and Past Commander of the Strathglass Commandery, Rumford, Maine, under the direction of which his funeral was conducted from the Dixfield Congregational Church on the evening of May 25th last.

"His life was gentle, and the elements  
So mixed in him that nature might stand up  
And say to all the world, 'This was a man.'"

J. A. MACDOUGALL.



## COUNTY SOCIETIES

### Androscoggin

President, LeRoy C. Gross, M. D., Auburn  
Secretary, Irving I. Goodof, M. D., Lewiston

### Aroostook

President, Joseph A. Donovan, M. D., Houlton  
Secretary, Clyde I. Swett, M. D., Island Falls

### Cumberland

President, Charles H. Gordon, M. D., Portland  
Secretary, Ralf S. Martin, M. D., Portland

### Franklin

President, Maynard B. Colley, M. D., Wilton  
Secretary, Paul E. Floyd, M. D., Farmington

### Hancock

President, James H. Crowe, M. D., Ellsworth  
Secretary, Charles H. Knickerbocker, M. D., Bar Harbor

### Kennebec

President, Harold E. Small, M. D., Augusta  
Secretary, Arch H. Morrell, M. D., Augusta

### Knox

President, Frederick C. Dennison, M. D., Thomaston  
Secretary, Frank W. Kibbe, M. D., Rockland

### Lincoln-Sagadahoc

President, Philip H. Sylvester, M. D., Damariscotta  
Secretary, Neil L. Parsons, M. D., Damariscotta

### Oxford

President, Roland L. McCormack, M. D., Norway  
Secretary, Dexter E. Elsemore, M. D., Dixfield

### Penobscot

President, Henry C. Knowlton, M. D., Bangor  
Secretary, Herbert C. Scribner, M. D., Bangor

### Piscataquis

President, John B. Curtis, M. D., Milo  
Secretary, Norman H. Nickerson, M. D., Greenville

### Somerset

President, Maurice E. Lord, M. D., Skowhegan  
Secretary, H. Carl Amrein, M. D., Madison

### Waldo

President, John A. Caswell, M. D., Belfast  
Secretary, Raymond L. Torrey, M. D., Searsport

### Washington

President, Willard H. Bunker, M. D., Calais  
Secretary, Karl V. Larson, M. D., East Machias

### York

President, J. Robert Downing, M. D., Kennebunk  
Secretary, C. W. Kinghorn, M. D., Kittery

## COUNTY SOCIETY NOTES

### Cumberland

Dr. Gisela K. Davidson of Portland, received her Fellowship Certificate at the annual Convocation of the American College of Chest Physicians, held at the Ambassador Hotel, Atlantic City, New Jersey, on June 4, 1949.

Dr. Francis J. Welch of Portland, is the Governor of the American College of Chest Physicians for the State of Maine, and Dr. Edward A. Greco of Portland, serves as Regent for the district.

### Oxford

The semi-annual meeting of the Oxford County Medical Society was held June 1, 1949, at the Mansion House, Poland Spring, Maine.

At the business meeting a resolution against any form of compulsory health insurance was unanimously passed. Dr. David S. Broughton, of Rumford, was elected to membership. Dr. James A. MacDougall reported for the Council, and Dr. Ralph A. Goodwin, President-elect of the Maine Medical Association, spoke briefly.

Dr. Henry C. Thacher of Auburn was the speaker at the Scientific Session. His subject was "Management of Diarrhea in Infants."

There were forty-four members and guests present.

D. E. ELSEMORE, M. D.,  
Secretary.

### Washington

A regular meeting of the Washington County Medical Society was held Wednesday, June 15, 1949, at the St. Croix Country Club, Calais, Maine, with a large representation from both sides of the river; twenty-one members and three guests being present. At 6.30 P. M., a lobster feed was served under the direction of Bill Haley.

Dr. Willard H. Bunker, President of the Society, introduced Dr. Carl W. Ruhlin of Bangor, who spoke on "Low Back Pain, a Diagnostic Problem." His talk was illustrated by lantern slides. He covered the various causes of low back pain and their diagnosis and treatment. He stated that probably 93% of low back cases could be treated by the general practitioner by use of rest, immobilization, procain hydrochloride and other means of therapy. After a short recess, Dr. Bunker introduced Dr. Lloyd Brown of Bangor. Dr. Brown spoke on "Chronic Suppurative Disease of the Lung," with emphasis on the surgery of bronchiectasis. He illustrated his talk with lantern slides. He covered the various causes of bronchiectasis and its diagnosis and treatment. He stated that Sulfonamide and Penicillin would help temporarily but development of lung surgery and advance in anesthesia have made it possible to cure by lobectomy with a very low mortality rate. He emphasized that many cases of bronchiectasis are undiscovered and untreated.

This was followed by a business meeting at which everyone was asked to mail their papers for THE JOURNAL to Dr. S. R. Webber of Calais, before July 15th. Dr. James Bates of Eastport, brought up the Fee Schedule for discussion and various points in the schedule were straightened out.

KARL V. LARSON, M. D.,  
Secretary.

## "Severe intractable asthma

requires more strenuous measures. ... Aminophyllin in doses of 0.25 Gm. dissolved in 10 cc. of water is often very effective when injected intravenously."<sup>1</sup>

To relax spasm, relieve congestion and restore deep, regular breathing;

# SEARLE AMINOPHYLLIN<sup>⚡</sup>

has proved a valuable drug—generally effective even in epinephrine-refractory cases.

Searle Aminophyllin is indicated in paroxysmal dyspnea, bronchial asthma, Cheyne-Stokes respiration and selected cardiac cases.

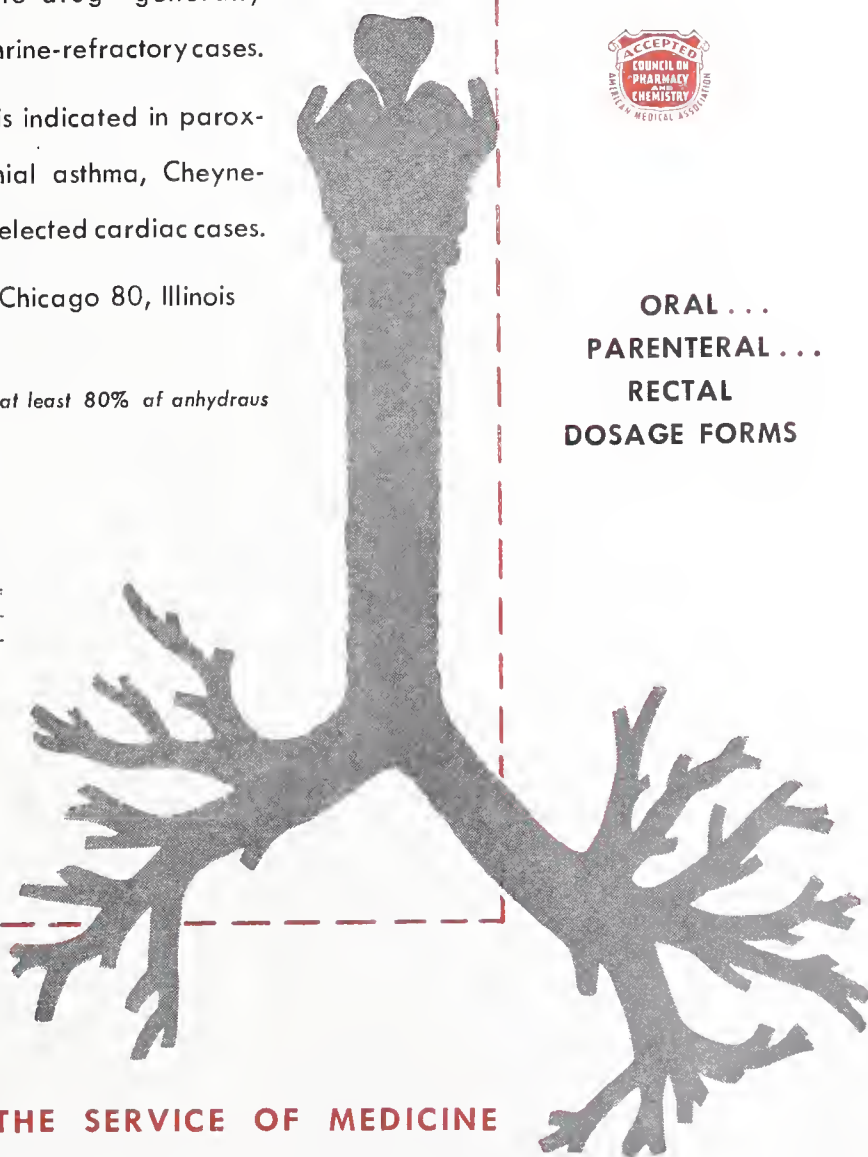
G. D. Searle & Co., Chicago 80, Illinois

\*Searle Aminophyllin contains at least 80% of anhydrous theophylline.

1. Rackemann, F. M., in Cecil, R. L.: Textbook of Medicine, ed. 7, Philadelphia, W. B. Saunders Company, 1948, p. 539.



ORAL ...  
PARENTERAL ...  
RECTAL  
DOSAGE FORMS



SEARLE

RESEARCH IN THE SERVICE OF MEDICINE



## Coming Meetings

### Washington

The next meeting of the Washington County Medical Society will be held in Dennysville, Wednesday, September 14, 1949.

KARL V. LARSON, M. D.,  
*Secretary.*

## New Members

### Oxford

(Admitted June 1, 1949)

David S. Broughton, M. D., Rumford, Maine.

## NEWS AND NOTES

### Reports of Medical Examinations for Veterans Administration Rating Agencies

The National Rehabilitation Commission of The American Legion wishes to call to the attention of the medical profession that many veterans who are attempting to get disability claims adjudicated before Veterans Administration rating agencies are experiencing delays and handicaps in accomplishment of final rating because of physicians' reports and statements which are unsatisfactory or not acceptable to the Veterans Administration for one reason or another. The purpose of this statement is to clarify what the Veterans Administration desires of physicians' reports to adjudicate claims properly. The Veterans Administration regulations require that the physician's statement be notarized only in initial establishment of service connection for a specific disease or condition. While this requirement is considered a waste of time by most physicians, it is a Veterans Administration requirement in establishing initial service connection. However, most doctors will be examining and working on reports for veterans who have already had service connection established, and are conducting the examination to determine whether the condition has improved, regressed or remained stationary. In such cases, the statement on the physician's letterhead is sufficient. Notarization is not required in these cases.

Since claims may be made months, or, in some cases, years after the physician has examined or treated the veteran for a given condition, the doctor should state in the body of his report whether the information is from his office or clinic records, or from memory. Since Veterans Administration adjudication personnel have among their number physicians, or they can obtain the advice of Veterans Administration doctors, the reports should be in professional language with no attempt to simplify the terminology for lay interpretation. Interpretation of the validity of the doctor's data in relation to the veteran's claim will be made by medical personnel. Therefore the reports should be as complete and detailed as possible.

In the report, the date of first treatment and the length of time the veteran has been observed by the doctor should be included. Details of the pertinent history and physical examination are essential. The detailed medical findings, both physical and laboratory, should be included. For instance, degree of extension or flexion of an ankle may be very important in determining adjudication results. Such detailed medical findings should be listed by the reporting physician. When this is done, the final diagnosis made by the doctor can be interpreted in the light of the data that led to the making of the diagnosis. It is not sufficient merely to state that the veteran was treated for a given condition, without giving some of the pertinent facts relative to the condition in the particular veteran. If laboratory tests or roentgenologic or other special examinations are done, reports of these should be included, if such reports are available. Some of these data may be valuable to aid the Veterans Administration in establishing the merit of a veteran's claim.

In summary, the medical report for the veteran for adjudication purposes should be complete and as detailed as possible. History, physical examination, laboratory and special examinations, with dates of period of observation and performance of examinations, are desired. Only with such complete reports can justice to the claim of the veteran be done by the Veterans Administration adjudication agencies.

### The American Congress of Physical Medicine

Will hold its twenty-seventh annual scientific and clinical session, September 6, 7, 8, 9 and 10, 1949, inclusive, at the Netherland Plaza Hotel, Cincinnati, Ohio. Scientific and clinical sessions will be given on the days of September 6, 7, 8, 9 and 10, 1949. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held September 6, 7, 8 and 9. These courses will be offered in two groups. One set of ten lectures will consist of basic subjects and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to physical therapy technicians who are registered with the American Registry of Physical Therapy Technicians. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

### State Division of Maternal and Child Health Institute of Pediatrics

#### Eastern Maine General Hospital, Bangor, Maine September 16, 1949

The State Division of Maternal and Child Health will hold a one-day Institute of Pediatrics at the Eastern Maine General Hospital, Bangor, Maine, on September 16, 1949. At present the program includes the following speakers:

Dr. Orvar Swenson, Children's Hospital, Boston, on *Surgery in Childhood*.

Dr. R. Cannon Eley, Children's Hospital, Boston, on *Child Growth and Development*.

Dr. Edward C. Curnen, Jr., Yale University School of Medicine, on *Infectious Diseases and Their Prevention*.

ELLA LANGER, M. D., *Director*,  
Division of Maternal and  
Child Health.

### Maine Society of Anesthesiologists to Meet in Portland, July 19th

There will be a Dinner Meeting of the Maine Society of Anesthesiologists July 19, 1949, at the Maine General Hospital, Portland, starting at 4.00 P. M.

Interested physicians are cordially invited to attend.

The program will consist of two motion pictures, "Endotracheal Anesthesia," and "Pediatric Anesthesia," to be followed by a discussion of Clinical Cases of Anesthesia in Children.

Dinner at 6.30 P. M., will be followed by a talk on "Anesthesia for Children," by Robert M. Smith, M. D., Director of Anesthesiology, Children's Hospital, Boston, Massachusetts.

JOHN R. LINCOLN, M. D., Portland,  
*Secretary.*

# TREASURER'S REPORT

To the Officers and Members of the Maine Medical Association:

The books of the Association and JOURNAL were closed and audited as of May 31, 1949, by Jordan and Jordan, Accountants and Auditors, Portland, who "found the same complete and correct in all details of record," and submitted the following statements "properly drawn up to show the true financial position of the Association, May 31, 1949, and the income and expense for the year under review."

FREDERICK R. CARTER, M. D.,  
Treasurer.

## BALANCE SHEET, MAY 31, 1949

### ASSETS

Cash in Banks .....	\$31,059.52
Accounts Receivable:—	
Dues .....	\$560.00
Advertising .....	653.70
	<u>1,213.70</u>
Securities .....	9,805.00
Furnishings and Equipment .....	1,092.59
Deferred Expenses:—	
Annual Meeting .....	\$ 216.95
Medical Advisory Committee .....	1,000.00
	<u>1,216.95</u>
	<u>\$44,387.76</u>
Trust Fund Investments .....	2,920.64
Canal National Bank — A. M. A. Assessment Fund .....	3,481.93
	<u>3,481.93</u>
Total Assets .....	<u>\$50,790.33</u>

### LIABILITIES

Accounts Payable .....	\$ 0.00
Withholding Taxes .....	193.14
Dues Paid in Advance .....	35.00
Deferred Income — Convention Exhibit Space .....	665.00
	<u>893.14</u>
Total Liabilities .....	<u>893.14</u>

Assets in Excess of Liabilities \$49,897.19

### CAPITAL AND FUNDS

Capital Account .....	\$43,494.62
Trust Funds .....	2,920.64
A. M. A. Assessment Fund .....	3,481.93
	<u>3,481.93</u>
Total Capital and Funds .....	<u>\$49,897.19</u>

### CAPITAL ACCOUNT

Balance—June 1, 1948 .....	\$42,803.14
Deduct:—	
Expenses incurred prior period billed and paid this period .....	\$ 85.99
1948 Dues Receivable Charged Off — Not collected .....	630.00
	<u>715.99</u>
	<u>\$42,087.15</u>
Add:—	
Gain on Security Called .....	\$ 80.00
Revenue in Excess of Expense — One Year .....	1,327.47
	<u>1,407.47</u>
Balance—May 31, 1949 .....	<u>\$43,494.62</u>

## TRUST FUNDS AND INVESTMENTS MAY 31, 1949

Prince A. Morrow Trust:—	
12 shares American Agricultural Chemical Co. (Cost) .....	\$ 348.00
Canal National Bank — Savings No. 3905 .....	1,379.00
	<u>\$1,727.00</u>
Thayer Library Trust:—	
Canal National Bank — Savings No. 3903 .....	1,193.64
Total Trust Fund Investments .....	<u>\$2,920.64</u>
Trust Funds:—	
Prince A. Morrow Fund:—	
Principal .....	\$ 554.94
Income .....	1,172.06
	<u>\$1,727.00</u>
Thayer Library Fund:—	
Principal .....	\$1,154.20
Income .....	39.44
	<u>1,193.64</u>
Total Trust Funds .....	<u>\$2,920.64</u>

## STATEMENT OF REVENUE AND EXPENSE ONE YEAR ENDED MAY 31, 1949

### REVENUE

Dues .....	\$25,235.00
Income from Investments .....	345.97
C. M. A. B. Advertising .....	6,529.66
Local Advertising .....	757.82
Subscriptions and Sales of JOURNALS .....	26.00
Exhibit Space Rentals—Convention .....	1,755.00
Total Revenue .....	<u>\$34,649.15</u>

### EXPENSE

Secretary and Treasurer's Office:—	
Salary — Secretary, Treasurer and Editor .....	\$4,000.00
Assistant Secretary .....	3,000.00
Office Assistance .....	72.00
President's Expenses .....	350.00
Secretary and Treasurer's Expenses .....	149.26
Councilors' Expenses .....	446.05
Office Expenses:—	
Rent and Lights .....	403.56
Supplies and Stationery .....	412.22
Telephone .....	195.88
Postage and Mailing Expense .....	260.75
Auditing .....	99.88
Treasurer's Bond .....	5.00



Advertising	30.00
Subscriptions and Periodicals	27.00
New Equipment and Repairs	106.16
Flowers	25.00
Miscellaneous	38.50
A. M. A. Meetings	358.02
Medical Advisory and Special Committees	1,123.36
Annual Meeting	1,697.24
Clinical Sessions	259.27
Delegates—New England Medical Societies	77.83
Delegate — National Physicians' Committee	170.31
50-Year Medals	163.80
Roster Reports and Bound JOURNALS	45.30
President's Gift	25.00
	<u>\$13,541.39</u>
Printing	\$8,116.58
Plates	196.66
	<u>\$8,313.24</u>
Executive Secretary's Office	<u>\$11,467.35</u>
Total Expenses	<u>\$33,321.98</u>
Revenue in Excess of Expense — One Year	<u>\$1,327.47</u>

EXECUTIVE SECRETARY'S EXPENSES	
Salary — Executive Secretary	\$6,500.00
Stenographer	1,882.36
Travel and Convention Expenses	432.77
Legislative Session	1,054.71
A. M. A. Meetings	350.18
Office Expenses:—	
Rent and Lights	417.69
Supplies and Stationery	393.77
Telephone	186.97
Postage	68.00
Subscriptions, Books and Periodicals	123.25
Miscellaneous	57.65
Total	<u>\$11,467.35</u>

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS  
ONE YEAR ENDED MAY 31, 1949

Cash in Banks—June 1, 1948	\$30,615.08
RECEIPTS	
Received from Dues	\$25,375.00
Income from Investments	345.97
Exhibit Space Rentals	1,490.00
Subscriptions and Sales of JOURNALS	26.00
Advertising	7,388.52
Withholding Taxes	1,314.64
Securities Sold	2,040.00
	<u>37,980.13</u>
	<u>\$68,595.21</u>

DISBURSEMENTS	
Secretary and Treasurer's Office:—	
Salaries	\$7,072.00
Traveling and Other Expenses	945.31
Office Expenses	1,603.95
A. M. A. Meetings	258.02
Medical Advisory and Special Committees	1,623.36
Annual Meetings	1,872.92
Clinical Sessions	259.27
Delegates — New England Medical Societies	77.83
Delegate — National Physicians' Committee	170.31
50-Year Medals	163.80
Roster Reports and Bound JOURNALS	45.30
President's Gift	25.00
Printing and Plates	8,313.24
Withholding Taxes	1,347.86
Annual Meeting—1947, 1948	174.77
Securities Purchased	2,000.00
	<u>\$26,052.94</u>
Executive Secretary's Office:—	
Salaries	\$8,382.36
Legislative Session	1,054.71
A. M. A. Meetings	350.18
Office Expenses	1,695.50
	<u>\$11,482.75</u>
	<u>37,535.69</u>
Cash in Banks—May 31, 1949	<u>\$31,059.52</u>

Canal National Bank — Checking Account	\$22,645.97
Canal National Bank — Savings Account	1,769.58
Maine Savings Bank	3,096.27
Portland Savings Bank	3,052.64
First National Granite Bank	495.06
	<u>\$31,059.52</u>

A. M. A. ASSESSMENT FUND ONE YEAR ENDED MAY 31, 1949	
Cash in Bank—June 1, 1948	\$ 0.00

RECEIPTS	
Received from Assessments	<u>\$13,075.00</u>
	<u>\$13,075.00</u>

DISBURSEMENTS	
Remitted to American Medical Association	\$9,500.00
National Education Campaign Expenses	93.07
	<u>9,593.07</u>
Canal National Bank — Balance May 31, 1949	<u>\$3,481.93</u>

SECURITIES MAY 31, 1949	
BONDS	

\$3,000 Portland Terminal Company, 1st Mtge. 5's, 1961	\$3,045.00
\$ 700 Prudence Bond Corp., 1st Mtge. Coll. Series 6, 5½'s, 1936 (Defaulted)	700.00
\$4,000 U. S. Savings Bonds, "G", Due July 1, 1956	4,000.00
\$2,000 U. S. Savings Bonds, "G", Due March 1, 1961	2,000.00

STOCKS	
10 Shares Morthon Corp. of N. Y.	60.00
Total Securities	<u>\$9,805.00</u>



# The Journal of the Maine Medical Association

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Volume Forty

Portland, Maine, August, 1949

No. 8

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## FOREWORD ON MAINE GENERAL HOSPITAL ISSUE

This issue of the JOURNAL represents the second issue of this hospital in the current hospital series over the past year. The committee appointed by the hospital staff for the purpose of supervising the assignment and collection of these papers has felt that this issue would be useful to reflect the activities of the hospital as a whole and with this objective, articles have been procured both from the clinical and administrative sections of the hospital organization. For example, the increasing importance of complete and accurate clinical records in any hospital today has made it seem worthwhile to devote one paper to the operation of the Medical Records Department of this hospital. The pressing problems of hospital finance have indicated the value of a paper from the administrative office dealing with a current phase of this subject. Other papers deal with the Dietary Department

with the objective of showing how useful this department can be to the staff in handling the various dietary problems that arise with their patients; in like manner a discussion of the current problems of the Social Service Department of this hospital has been considered to be an interesting and timely subject to include in this group. The special hospital departments of Laboratory, Radium Therapy, X-ray, and Anesthesiology have also presented a paper dealing with current problems in their departments. The customary clinical papers have been presented by the departments of Otolaryngology, Obstetrics, Surgical Resident group, and these various subjects have been on the basis of individual choice of the authors.

EDITORIAL COMMITTEE,  
MAINE GENERAL HOSPITAL.



## CLINICAL

## MALIGNANT DISEASE OF THE LARYNX

GEORGE O. CUMMINGS, M. D., Portland, Maine

This report is based on the study of 53 cases of malignant disease of the larynx seen at the Maine General Hospital or in private practice.

There were 40 males and 13 females. The youngest was a woman of 21 and the oldest a man of 83. The age occurrence was: 1 between 20-30, 1 between 30-40, 9 between 40-50, 18 between 50-60, 14 between 60-70, 7 between 70-80 and 2 over 80. There were 50 epidermoid carcinomas, 32 grade 1, 9 grade 2, 4 grade 3 and 5 undetermined; 1 basal cell carcinoma, 1 lymphosarcoma and 1 fibrosarcoma.

Carcinoma of the larynx is most frequently found in those who use their voices excessively or improperly. It may arise from benign growths.

Laryngeal carcinomas are divided into two groups: first, intrinsic lesions which arise within the cartilaginous box of the larynx, principally from the vocal cords; second, extrinsic lesions which arise from outside of the cartilaginous box of the larynx, from the epiglottis, from the folds between the epiglottis and the arytenoids, or from the post-arytenoid or post-cricoid space.

This classification is important because the symptomology and treatment differ.

Note: This report briefs the histories of 53 consecutive cases of malignant disease of the larynx observed in the last 25 years. This is not a large series, but Maine is not a large state having a population of about 800,000 and malignant disease of the larynx is not common. Nine cases seen after operations elsewhere are not included as they were not followed.

The constant reiteration over the years: "Chronic hoarseness must be investigated" has increased the number of benign and malignant cases of laryngeal disease seen each year and has brought them in earlier.

For the sake of brevity and clarity many details of history and treatment have been omitted. More tracheotomies were performed than noted.

In the cases coming to operation the assistance at times of Drs. Webber, Tibbetts, Lothrop, Parker, Asali, A. C. Johnson and Ives is gratefully acknowledged.

## DIAGNOSIS

It is usually possible by laryngeal mirror to differentiate between benign and malignant growths, to recognize tubercular lesions and to suspect syphilis. Nevertheless, all new growths in the larynx should be examined via the direct laryngoscope, biopsied and examined microscopically. In addition, an X-ray study should be made of the chest and a Kahn and Hinton performed.

## TREATMENT

*More 5-year cures can be expected in cases of intrinsic cancer of the larynx in which diagnosis has*

*been made early, than in cancer in any other part of the body, for in intrinsic cancer hoarseness appears early and the cancer is fenced in by a cartilaginous box. Surgery is to be preferred to deep X-ray treatment as it offers more 5-year cures. Deep X-ray may be used to reinforce surgery, to treat metastatic glands, to treat patients unwilling or physically unable to undergo surgery, to treat extrinsic cancer, or to palliate extensions of intrinsic cancer. Radon seeds may be implanted into growths or glands usually in conjunction with deep X-ray treatment. Deep X-ray treatment may cause distressing perichondritis of the laryngeal cartilages and, however successful, usually leaves in its wake a dry, uncomfortable throat with a harsh, brassy voice.*

## INTRINSIC CANCER OF THE LARYNX

There were 29 cases of intrinsic cancer of the larynx. *Chronic hoarseness is the usual presenting symptom.* Associated symptoms are clearing the throat, the sensation of mucous on the vocal cords, indefinite smarting or burning in the laryngeal region and occasionally referred pain to the ear.

## LARYNGOFISSURE (4)

Laryngofissure is the operation of choice when the growth is limited to a vocal cord and can be removed with a centimeter margin of normal tissue. This procedure consists of splitting the thyroid cartilage, opening the larynx and removing the diseased area with a centimeter margin of normal tissue. It leaves the patient with a hoarse but usable voice. There were 4 laryngofissures:

*S. I., age 53, hoarse 2 years, had a grade 1 epidermoid carcinoma on the anterior 1/2 of the right cord. She was operated on October 30, 1940, has since married the second time. Living and well 9 years.*

*E. E., age 52, hoarse 2 years, had a grade 1 epidermoid carcinoma on the mid-third of the left cord. She was operated on November 1, 1941. Living and well 8 years.*

*J. N., age 76, hoarse 6 months, had a grade 1 epidermoid carcinoma on the anterior 1/2 of the right cord which apparently sprung from a papilloma. He was operated on July 26, 1944. Living and well 5 years.*

*J. H., age 43, hoarse 1 year, had a grade 2 epidermoid carcinoma in the mid-third of the right cord. A laryngofissure, May 6, 1946; local recurrence and a laryngectomy July 10, 1947. He speaks very well with an artificial larynx. Living and well 2 years.*

## LARYNGECTOMY (15)

A laryngectomy is the operation of choice when the tumor has originated within the cartilaginous box of the larynx, but is so located or has become so extensive that it cannot be removed by laryngofissure with a centimeter of margin of normal tissue, and provided there are no apparent metastases. In the latter instance laryngectomy may be accompanied by block dissection of the neck. Certain post-arytenoidal carcinomas may be amenable to laryngectomy.

*D. LaB., age 58, hoarse 6 months, had a grade 1 epidermoid carcinoma on the posterior  $\frac{2}{3}$  of the right cord. He was operated on May 4, 1930. He uses an artificial larynx. Living and well 18 years.*

*G. G., age 47, hoarse 6 or 7 years, had a grade 1 epidermoid carcinoma on the right cord and arytenoid. He was operated on December 13, 1933; uses an artificial larynx. Living and well 15 years.*

*T. L., age 65, hoarse 8 months, had a grade 1 epidermoid carcinoma on the anterior half of both vocal cords. He was operated on June 30, 1937, had recurrences to the nodes at the angle of the jaw; deep X-ray treatment. Committed suicide in  $2\frac{1}{2}$  years. Comment: When the node was first noticed he might have had a block dissection of neck. He spoke only Russian.*

*E. L., age 53, hoarse 2 years, had a grade 1 epidermoid carcinoma on the anterior  $\frac{1}{2}$  of both cords. He was operated on September 3, 1937; has a good esophageal voice. Living and well 12 years.*

*F. C., age 49, hoarse 22 months, had a grade 2 epidermoid carcinoma affecting the entire right cord to the false cord anteriorly. He was operated on September 29, 1942, has an excellent esophageal voice. Living and well 7 years.*

*D. M., age 55, hoarse off and on for years, worse for the last 18 months, had an epidermoid carcinoma grade 1 affecting  $\frac{3}{4}$  of the left cord and  $\frac{1}{2}$  of the right cord to the base of the epiglottis. The left cord was fixed. This apparently began as a leukoplakia. He was operated on April 5, 1943; does not use an artificial larynx and does not have an esophageal voice. Living and well 6 years.*

*E. S., age 60, hoarse 2 months, had an epidermoid carcinoma grade 1 affecting the entire right cord,  $\frac{1}{4}$  of the left cord and extending below the cords. He was operated on November 15, 1943. He has a good whisper, but does not use an artificial larynx, nor has he an esophageal voice. Living and well 6 years.*

*D. L., age 59, hoarse 2 weeks, painful swallowing 6 weeks, had a grade 1 epidermoid carcinoma at the base of the epiglottis above the false cords. The right cord was fixed. He was operated on October 14, 1944, and later had metastasis to the gland at the*

angle of the jaw. He received deep X-ray treatment. Comment: He had a low mentality and was hard to manage. He speaks only with a whisper. *Living and well 5 years.*

*D. H., age 61, hoarse 2 years, had an epidermoid carcinoma grade 1 affecting  $\frac{1}{2}$  of the right and  $\frac{3}{4}$  of the left cord and extending downward. This evidently began as a leukoplakia. He was operated on October 25, 1944. He speaks only with a whisper. He is living and well 5 years.*

*M. O'T., age 72, had a fibrosarcoma, leukoplakia and later a grade 1 epidermoid carcinoma. First seen June 6, 1944, in urgent dyspnoea. A growth the size of a jelly bean removed, a fibrosarcoma, below this was a leukoplakia on the vocal cords which by April 8, 1946, had developed a grade 1 epidermoid carcinoma. Laryngectomy. Living and well 3 years. Comment: A malignancy developing in a benign lesion. She had been hoarse for years and talked constantly.<sup>1</sup>*

*L. G., age 47, hoarse 2 years, and had an acute dyspnoea and painful swallowing for a few days. Had an epidermoid carcinoma grade 2 affecting the entire left cord to the arytenoid. This was fungating. She was operated on January 23, 1946. She is acquiring an esophageal voice. Living and well 3 years.*

*J. H., age 43. See laryngofissure. Laryngectomy July 10, 1947, uses artificial larynx. Living and well 2 years.*

*L. B., age 21, hoarse 7 months, had a grade 1 epidermoid carcinoma, affecting the entire right true and false cords which were fixed. She was operated on August 11, 1947, is acquiring an esophageal voice. Living and well 2 years. Comment: She had an 8-months-old baby before her operation and has since had another child.*

*F. N., age 58, hoarse off and on for years but worse the last 6 months, had an epidermoid carcinoma grade 1 affecting the anterior  $\frac{2}{3}$  of the right and  $\frac{1}{4}$  of the left cords. She was operated on May 2, 1948, has an excellent esophageal voice. Living and well 1 year.*

*V. L., age 53, hoarse since World War I, worse the last year, had an epidermoid carcinoma grade 1, 6 weeks before admission he was seen by a physician who burned a growth from his larynx with a "High Frecator" with no biopsy. His false cords were swollen, particularly the right. In the next 7 months 4 direct laryngoscopies revealed no growth. It was felt that he had a perichondritis secondary to the cauterization or possibly a carcinoma arising in the ventricle of the larynx. The angle of the thyroid cartilage was widened. The right side became fluctuant, was opened and pus obtained. This strengthened our opinion that he had a perichondritis. A tracheotomy was done. Lipiodol demonstrated a fistula from*



neck to larynx. He coughed and raised as the pus drained into his larynx. He suffered unbearable referred pain to the ear. It was felt that the perichondritis and pain would continue for months and result in a deformed larynx. It seemed that with penicillin and sulfa a laryngectomy could be safely done. The last cut to remove the larynx went through carcinoma tissue which we could not get around. The next day he was in poor shape and bleeding had occurred into the wound. It seemed best to control it with external pressure. The wound broke down and a complete pharyngostome resulted which we never entirely closed. It is believed that the carcinoma originated in the ventricle of the larynx. He had deep X-ray treatment. *Dead 7 months later.* Comment: 1. No tumor should be removed without microscopic study. 2. Curetting from the fistula's tract should have been studied. 3. The wound should have re-opened on the second day.

There were no operative deaths. Our first cases had pharyngeal fistulas which drained 4 or 5 weeks before healing, our later cases healed primarily. With 3 exceptions; the suicide, the low mentality and the last patient, the patients have been happy, have led normal lives and have continued their work. Five have esophageal voices, 4 use an artificial larynx and 6 use a whisper.

#### TUMOR REMOVED AT BIOPSY

*S. T., age 73, choking sensation, felt something in throat for 4 months, epidermoid carcinoma grade 1, a pedunculated polyp which almost filled larynx with a long stock, removed. Carcinoma on free end of polyp. Attachment could not be found two days later when radon was to be inserted. First seen March 25, 1947. Living and well 2 years.*

#### OPERATION NOT ADVISED (4)

*W. J., age 65, hoarse 7 months, had a grade 2 epidermoid carcinoma of the entire right cord and anterior commissure. He was not operated on because he was below par mentally, syphilitic, a chronic alcoholic and had a laryngoptosis. His thyroid cartilage rested on his sternal notch. Dead 5 months.*

*J. LaC., age 58, felt a vague smarting and a feeling of something in his throat for 6 weeks. He had an epidermoid carcinoma grade 3 just below his false cords. There was a slight fullness between his epiglottis and tongue. He was given deep X-ray treatment. First seen May 6, 1948. There is now no evidence of growth. Living and well 1 year.*

*C. G., age 83, hoarse 8 months, type ?, right cord fixed, false cord swollen, true cords not seen, no adenitis. Deep X-ray, tracheotomy. Died from hemorrhage from tracheotomy tube. First seen April 11, 1939. Dead 1 year. Comment: Had his physical con-*

*dition been sufficiently good he might have had a laryngectomy.*

*H. H., age 65, hoarse 8 months, epidermoid carcinoma grade 1 left cord fixed, false cord swollen, adenitis. Deep X-ray. Tracheotomy. First seen June 1, 1947. Living 2 years. Comment: Might have had laryngectomy plus block dissection of neck.*

#### OPERATION REFUSED (6)

*C. L., age 59, hoarse 1 year, epidermoid carcinoma grade 1, left false cord and arytenoid, with some fixation. A chiropractor said he could cure him. He returned too late for operation and was given deep X-ray treatment. First seen September 5, 1929. Dead 14 months.*

*L. C., age 53, hoarse 2½ months, had an epidermoid carcinoma grade 2 in the center of the left cord. He was an ideal candidate for laryngofissure. He returned too late for a laryngectomy and had deep X-ray treatment. First seen July 10, 1937. Dead 2½ years.*

*R. C., age 52, hoarse 6 months, epidermoid carcinoma grade 1 from right cord to arytenoid. He refused a biopsy, was admitted later in urgent dyspnoea and pneumonia from overflow into tracheobronchial tree. First seen August 27, 1947. Dead 5 months.*

*J. C., age 56, hoarse 2 months, epidermoid carcinoma grade 2 affecting the anterior ⅔ of the left cord which was fixed. He refused treatment and operation. First seen April 3, 1943. Dead 1 year.*

*W. F., age 45, hoarse 6 months, had an epidermoid carcinoma grade 3 affecting the posterior end of the right cord and below. He delayed, had urgent dyspnoea, tracheotomy, deep X-ray treatment. First seen August 26, 1944. Dead 8 months.*

*T. N., age 48, hoarse 3 months, epidermoid carcinoma grade 2 left false cord, arytenoid, cord fixed. First seen June 13, 1946, refused treatment and operation. Later had deep X-ray. Dead 2 months.*

#### EXTRINSIC CANCERS OF THE LARYNX

There were 24 cases of extrinsic cancer of the larynx. The predominating symptoms in order of frequency and occurrence were smarting or burning, the sensation of something in the throat, something they kept swallowing, painful swallowing, difficult swallowing. Occasionally they had pain in the ear. Hoarseness came later and was frequently accompanied by cough from overflow into the larynx.

#### CANCER OF THE EPIGLOTTIS (7)

*C. B., age 63, dysphagia 8 weeks, epidermoid carcinoma grade 1 at one corner of the epiglottis treated*

with radon seeds. First seen October 21, 1932. *Dead 7 months.*

*A. S., age 58, dysphagia indefinite time, epidermoid carcinoma grade 2, epiglottis, glands of neck and parotid. Deep X-ray. First seen March 17, 1944, because of glands in neck. Dead 6 weeks.*

*J. B., age 73, throat smarted, sensations of foreign body, later hoarseness for 8 months, epidermoid carcinoma grade 1 epiglottis and base of tongue. Deep X-ray. First seen March 3, 1939. Dead 1 year.*

*J. B., age 66, discomfort in throat for indefinite time, then dysphagia, later hoarseness, epidermoid carcinoma grade 1, epiglottis, base of tongue, large gland at angle of jaw. Deep X-ray. First seen August 1, 1947. Longevity unknown.*

*C. S., age 66, painful and difficult swallowing for a few months, epidermoid carcinoma grade 1, epiglottis, base of tongue and marked adenitis. Hopeless on admission. First seen October 18, 1936. Dead 4 days.*

*W. F., age 52, discomfort then difficult swallowing for 4 months, hoarseness two months, epidermoid carcinoma grade 1, epiglottis with edema of arytenoid. Deep X-ray. First seen September 14, 1938. Living and well 9 years.*

*B. B., age 46, at first smarting and burning, sensation of something in throat, then dysphagia and choking. Epidermoid carcinoma grade 2, fungating from epiglottis to base of tongue and right aryteno-epiglottic fold. Deep X-ray. First seen May 7, 1948. Living and well 1 year.*

CANCER OF THE ARYTENO-EPIGLOTTIC FOLD (4)

*C. N., age 74, dysphagia and hoarseness 4 weeks, epidermoid carcinoma grade 1 left arytenoid fold to piriform sinus. Deep X-ray radon. First seen January 10, 1930. Dead 4 years. (Not of cancer.)*

*J. A., age 48, indefinite throat discomfort, sore throat, then dyspnoea 1 month, hoarseness 2 weeks. Epidermoid carcinoma grade 1 fungating from aryteno-epiglottic fold. Deep X-ray. Tracheotomy. First seen July 2, 1942. Dead 1 year.*

*E. F., age 67, pain in ear one month, epidermoid carcinoma grade 1 right aryteno-epiglottic fold. Deep X-ray, tracheotomy. First seen June 21, 1938. Dead 1 year.*

*G. K., age 71, sensation of something in throat and pain in the ear, type ? fungating from right arytenoid over glottic chink. First seen August 27, 1945. Refused biopsy. Longevity unknown.*

POST ARYTENOID OR POST CRICOID  
MALIGNANCIES (4)

*R. D., age 77, increasing difficulty in swallowing 19 months, later dyspnoea and hoarseness, epidermoid*

*carcinoma grade 1 fungating post-arytenoid. Radon. First seen December 12, 1932. Dead 2 months.*

*J. P., age 65, smarting and burning for 6 months, then dysphagia, epidermoid carcinoma grade 2 post-arytenoid fungating mass. Tonsilectomy had been done by a physician because of smarting and burning. Deep X-ray. First seen May 23, 1935. Dead 3½ months.*

*E. S., age 38, sore throat for 8 months, hoarse 1 month, epidermoid carcinoma grade 1. Post arytenoid mass. Deep X-ray, radon, tracheotomy. First seen April 23, 1935. Dead 6 months. Comment: I believe she might have had a laryngectomy.*

*H. J., age 44, dysphagia and painful swallowing 3 months, had a lymphosarcoma in the post-arytenoid region, a macular rash on arms and legs, later an enlarged liver, tracheotomy, metastases to skin to one breast, then the other, to large bowel with obstruction, to jaw, to genitalia, to lower ribs. These were all confirmed by biopsy and controlled by deep X-ray. She was first seen March 25, 1934, had a coronary occlusion from a metastasis. Dead 20 months.<sup>2</sup>*

PIRIFORM SINUS (3)

*M. D., age 82, painful swallowing 6 weeks, epidermoid carcinoma grade 1, to piriform sinus from arytenoid, right cord fixed, large glands. Radon seeds. First seen June 20, 1944. Dead 4 months.*

*L. T., age 66, dysphagia and adenitis 4 weeks, epidermoid carcinoma grade 3, fungating right piriform sinus, hoarse 1 year. Deep X-ray. First seen February 21, 1946. Longevity unknown.*

*E. S., age 52, dysphagia 6 months, epidermoid carcinoma grade 2, fungating left piriform sinus. Deep X-ray, gastrostomy. Dead 9 months.*

VERY EXTENSIVE ON ADMISSION (6)

*J. J., age 70, dysphagia and hoarseness for months, dyspnoea, type ?, larynx filled with growth, large glands. First seen October 26, 1928. Dead 5 days.*

*B. S., age 46, dysphagia, hoarseness and dyspnoea, basal cell carcinoma, larynx filled with growth, large glands (one opened by physician). First seen November 3, 1928. Dead 1 month.*

*C. L., age 59, epidermoid carcinoma grade 1 filled with fungating mass, glands (one opened by physician). First seen October 1, 1929. Dead 2 months.*

*J. I., age 62, dysphagia and painful swallowing for some months, later dyspnoea, epidermoid carcinoma grade 1 (biopsy from gland), larynx distended with edema. First seen January 1, 1928. Dead 5 days.*

*Continued on page 212*



## TOWARD BETTER PRENATAL CARE

ROBERT V. LORIMER, M. D.

It is the aim of this brief presentation to highlight only a very few of the many recent developments which give promise in offering the gravid woman a less hazardous obstetrical career.

One must be impressed with the important advances made in therapeutics, notably the employment of safer chemotherapy, antibiotics, analgesia, anaesthesia, blood replacement, and many other factors which, when applied to the problem of certain obstetrical catastrophes, have given us a freedom of choice with a larger margin of safety than we have hitherto enjoyed. There is, however, a growing conviction that many of these disasters can, and in the future will be avoided by proper measures instituted early in pregnancy. This paper deals only with preventive obstetrics and seeks to emphasize certain aspects of the problem which appear relevant and applicable in this community.

The physician who elects to assume the care of the pregnant woman thereby shoulders a responsibility which extends in the average over a considerable period. He must realize that pregnancy and childbirth are not always normal processes, that complications frequently occur which may be inimical to the safety of either the mother or her child. The aim of the conscientious physician must be:

- (1) To provide the pregnant patient with the best care available in the light of present experience and facilities.
- (2) To exercise constant, watchful apprehension in the detection of abnormalities which most frequently give slight although definite warning of their approach.
- (3) To treat intelligently those complications which occur without warning or in the light of present knowledge are not considered preventable.

He cannot discharge his responsibility until the patient and her infant have been safely conducted through pregnancy, labor, and the puerperium, *but the foundation of good obstetrical care is laid at the initial visit of the gravid woman.*

That a careful history and physical examination are absolute necessities if one is to intelligently and safely deal with pregnancy is a statement so trite that one might be hesitant in belaboring the point, were it not for the fact that maternal mortality reports are replete with cases where even a minimal application of the stethoscope and pelvimeter at the time of initial prenatal examination would have revealed abnormalities so obvious that tragedy might have been averted.

The recognition of possible problems created by various prior infectious and metabolic diseases, and abnormalities of the obstetrical history should furnish adequate grounds for thorough investigation of these aspects.

Physical examination should be detailed enough to rule out any clinically detectable abnormalities incompatible with successful completion of pregnancy. Careful examination of the pelvic organs will save the physician much future embarrassment owing to failure of recognition of obvious pelvic pathology.

Office laboratory examinations should include as a minimum a hemoglobin determination and routine urine, which should be repeated throughout the prenatal course to insure against the development of proteinuria or anemia. It is assumed that a test for syphilis will also be obtained.

The above essentials having been completed, the physician turns his attention to an estimation of the capacity of the pelvis. Any recent survey of the literature in the matter of the value of clinical pelvimetry is certain to chasten the obstetrician who believes that he is able to state pelvic measurements with any real degree of accuracy. On the other hand, Eastman<sup>1</sup> in a recent review on the subject entitled "*Pelvic Mensuration: A Study in the Perpetuation of Error*" writes "abject reliance on specific pelvic measurements (i.e. X-ray pelvimetry) to the subordination or even to the utter neglect of the over-all picture . . . has been even more harmful than helpful to the intelligent management of pelvic contraction."

Perhaps one of the most serious errors in clinical pelvimetry is the widespread dependence on the classical measurements of the external conjugate, intercrural, and interspinous diameters. The figures obtained from the measuring of these dimensions are so unreliable in relation to the actual internal pelvic diameters that they are without significance in a given case, as proved by Dippel<sup>2</sup> among others, and the probability is that they will gradually be disregarded in future treatises on obstetrics.

In regard to mid-pelvic measurements, recent emphasis by Eller and Mengert<sup>3</sup> is placed on the treacherousness of clinical measurement of this woman's land, marked mid-pelvic contraction having been found to exist even with conventional pelvic measurements of the inlet and outlet apparently adequate, and in the presence of ante-partum engagement of the vertex. Since such an occurrence may necessitate traumatizing forceps delivery or Cesarean section following a protracted labor when the condition of the patient is far from optimal, the importance of

recognition of an inadequate mid-pelvis needs no emphasis.

Even clinical measurement of the outlet, the last stronghold of the pelvimeter, is likewise falling into disrepute. Thoms<sup>4</sup> perhaps our foremost authority on this subject, concludes that outlet pelvimetry is unsatisfactory.

With these developments in mind, what position should be taken in regard to pelvic mensuration? There is no mistaking the trend toward routine X-ray pelvimetry, and it is believed that in time it will be regarded as an indispensable part of the investigation of the obstetrical patient. Nevertheless, the caution that it is unwise to place undue emphasis on X-ray pelvimetry alone should be heeded. At the present, the interests of the patient will best be served by careful clinical pelvimetry, roentgenological measurements being reserved for those patients who give evidence of previous dystocia, unexplained stillbirth, or who on careful examination show one or more of the following: shortened diagonal conjugate, prominent ischial spines, sacral deformity, or narrowed sacro-sciatic notch. In measurement of the outlet, a bi-ischial diameter of 8.5 cm. or less, especially if the sum of the bi-ischial and posterior sagittal diameter is 15.0 cm. or less, should demand further radiologic study. The physician who acquires familiarity with these measurements will no doubt make mistakes, but he will make fewer than he who neglects them entirely, and he will uncover cases of possible, probable, or certain pelvic contraction which may avert tragedy for mother and fetus, as well as considerable mental hazard for himself.

#### THE CHEST SURVEY FILM

Roentgenographic examination of the chest, according to the best available opinion, should be done as routinely as the serological test for syphilis. Friedman and Garber<sup>5</sup> state that in women of child-bearing age, one out of six deaths is due to tuberculosis, which is still the principal cause of death in women aged 15 to 44 years. Jacobs<sup>6</sup> in Great Britain found that routine roentgenologic chest examinations disclosed 1.53 per cent of pregnant women with pulmonary tuberculosis, of which 1.61 per cent were active, 0.25 per cent probably active. Graham<sup>7</sup> in this country reported that of 2,067 private obstetrical patients subjected to routine photoroentgen chest survey, significant lesions were found in 3.44 per cent with 0.77 per cent active cases.

The generally accepted opinion of recent workers is that pregnancy exerts little, if any, effect on the incidence or course of tuberculosis, although lack of institutional facilities and socio-economic factors may indicate the wisdom of interruption in certain cases.<sup>8</sup> Nevertheless, since success of therapy depends on early recognition, and the problem of contagion is

ever present in regard to the newborn or other members of the family, any method which allows the obstetrician to detect tuberculosis in the prenatal patient without the expense of the conventional large film is indeed welcome. The conclusion is that routine chest survey films using the photoroentgen unit makes the procedure simple, inexpensive, definitely worth while and justified as part of routine prenatal care. The deficiency of the stethoscope in the detection of early tuberculosis needs no emphasis.

#### THE RH FACTOR

The significance of the Rh factor in obstetrics makes it important that the basic principles of this problem be understood by the obstetrician. Extensive studies have led to the postulate that erythroblastosis fetalis is the result of formation of agglutinins in the blood of the Rh-negative mother either as a result of previous transfusions of Rh-positive blood or the presence of an Rh-positive fetus. Because the consequences of Rh incompatibility may in some cases be reversed by new techniques of exchange transfusion of the newborn, it is therefore the responsibility of the physician to investigate the Rh factor of every pregnant patient.

Conventional typing of the patient's blood, carried out at the same time, is considered important in the prevention of delay in controlling massive hemorrhage, and should be performed preferably in every pregnant patient, as recommended by Cosgrove,<sup>9</sup> Beccham,<sup>10</sup> and others.

#### VAGINAL CYTOLOGY

Although fortunately not common, the coexistence of cancer of the reproductive tract and pregnancy can occur. The detection of such a lesion in the pre-invasive stage might alter the otherwise grave outlook. The introduction of the Papanicolaou smear has added a new weapon to our armamentarium. It would seem that the very encouraging reports as to its efficiency, simplicity, and the low cost of this test warrant its employment as a routine in the examination of the gravid woman. It is easily obtained at the time of routine pelvic examination.

#### THE IMPORTANCE OF ADEQUATE NUTRITION IN PREGNANCY

There is a recent widespread interest in the effects of dietary deficiency in pregnancy. The belief is gaining that inadequate diet is a contributing factor to many major and minor obstetrical difficulties. According to some authors, a proper nutritional status will prevent or decrease the incidence of abortion, anemia, toxemia, prematurity, fetal abnormalities, stillbirths, and neonatal deaths. Such sweeping assumptions are hardly justified at present, but the



importance of certain dietary regulations is now widely appreciated. Space permits only brief mention of several important contributions.

In relation to toxemia, the factor of adequate protein intake in its prevention is acknowledged by almost every recent writer on the subject. Not only is the emphasis on the value of a high protein, high mineral, and vitamin intake, but studies on sodium excretion and water balance have led to the general adoption of a program of restriction of sodium intake and fluids, particularly in the latter part of pregnancy.

In the field of ante-natal pediatrics, experimental evidence is accumulating that congenital defects of lens, palate, teeth, and the heart septa, whose critical period of development is from the fifth to the ninth week may be due to defective nutrition.<sup>11</sup>

In relation to toxemia, the factor of adequate protein diet in its prevention is acknowledged by almost every recent writer on the subject. Theobald<sup>12</sup> in Great Britain believes that dietary deficiency alone satisfies all eclamptic postulates.

Leverton and McMillan<sup>13</sup> believe that protein inadequacy is widespread in the diet of pregnant women. Those women whose protein intake was augmented by an extra serving of meat daily in addition in self-chosen diet from four months antepartum to three months post-partum had higher hemoglobin values and red cell counts, less edema and better lactation.

Blair, Porter and Atkinson<sup>14</sup> believe that the 85 gm. daily figure of the U. S. National Research Council on protein requirement of the last half of pregnancy is minimal, and that 100-120 gms. per day is safer. Increased protein need is manifest in early pregnancy and steadily increases with fetal growth. They emphasize correctly that the appearance of proteinuria is not a signal to lower protein intake, but to augment the plasma proteins. Where economic factors make it difficult for the patient to maintain a high protein diet they have used skim milk powder with success.

Not only is the emphasis on the value of a high protein, high mineral, and vitamin intake, but more and more investigators are apparently finding that restricted caloric consumption, achieved by limitation of carbohydrates and fats, exerts a beneficial influence on the pregnant woman.

Dieckman and his associates<sup>15</sup> believe that total weight gain in pregnancy should be limited to about 18 pounds above the ideal weight. Such a goal is achieved by careful dietary control with administration of adequate protein, mineral and vitamins and rigid restriction of caloric values, notably carbohydrates and fats.

Loughran<sup>16</sup> limited 325 patients to a 15-pound weight gain on a similar diet. He believes that onset

of toxemia is concerned with improper water metabolism, and carefully controlled the fluid and salt intake. In these patients and in his hospital where the routine was used, there was a total abolition of eclampsia, no cases having occurred since 1936. Minimal transient hypertension was noted in the prenatal course, but not at term, in only 27 cases. Proteinuria of appreciable degree was found in only nine specimens. Babies were average in size. He believes labor to be definitely shortened, in both primiparous and multiparous patients.

The People's League of Health<sup>17</sup> studied a group of over 5,000 women, divided almost equally into treated and control groups in both primigravida and multigravida categories. The treated groups receiving a special diet high in protein were apparently protected against the risk of toxemia in a ratio of almost 30 per cent.

Baird<sup>18</sup> believes that stillbirth and neonatal death rates will be lowered most substantially by improvement in the health and nutrition of the mothers, although he attaches considerable importance to growth and nutrition of the patient in early years. Garry and Wood<sup>19</sup> in a review of present work on nutrition in pregnancy believe that the rate of stillbirths, premature births, and neonatal deaths is falling and will continue to do so with improvement in maternal nutrition.

Ebbs, Tisdall, in their Toronto studies<sup>20, 21</sup> found that the incidence of premature birth in women with poor diets was 8.0 per cent, in those with supplemented diets, 2.2 per cent, and in those whose diets were considered adequate but not supplemented, 3.0 per cent.

Eastman<sup>22</sup> summarizes this evidence editorially by stating: "The belief is growing on the part of competent observers that premature labor is due in large measure to defective maternal diet . . . If this be true . . . and . . . there is considerable evidence that it is true, obstetricians as well as nutritionists face here one of the greatest opportunities in all medicine for the mass saving of human life . . . The question is, of course, could this challenge be met more or less, by a widespread program emphasizing the necessity for better balanced diets for all expectant mothers?"

I believe that sufficient evidence is now at hand to indicate the application of our improved knowledge of nutrition to the routine care of the prenatal patient. The coöperation of the patient is easily secured if the physician will but take the time to explain the purpose of the diet, and the importance of adhering to it for her own safety and that of her unborn child.

#### DIETHYLSTILBESTROL

The effects of diethylstilbestrol in the prevention of premature senility of the placenta, which appears to be characteristic of late pregnancy accidents, has

been reported by Smith and Smith and co-workers<sup>23</sup> in a series of investigations which give great promise of widespread application in successful prophylaxis against repeated obstetrical catastrophies, both maternal and fetal, due to steroid deficiency. They show that oral administration of diethylstilbestrol in pregnancy stimulates the placental elaboration of estrogen and progesterone, a deficiency of which invariably precedes the onset of pre-eclampsia, eclampsia, premature delivery, and fetal death.<sup>24</sup> These investigations are still in progress, but the indications for the use of diethylstilbestrol have been tentatively extended by more recent work<sup>25</sup> to include prophylaxis against habitual abortion and definitive treatment of threatened abortion, as well as prophylactically against recurrent complications of late pregnancy, characteristically found in women with essential hypertension, diabetes, and with a history of late pregnancy toxemia, premature labors, and low fetal salvage. There is extremely suggestive evidence from these studies, confirmed by White<sup>26</sup> in investigations of pregnant diabetics, that the administration of stilbestrol may postpone the advent and lessen the severity of obstetric complications, thereby increasing fetal survival. The mechanism of this favorable action is thought to be the prevention of an otherwise progressive deficiency of steroid hormones which is probably secondary to vascular deficiency. The dosage schedule recommended, based on quantitative determination of hormonal levels in normal pregnancy, is as follows: Five milligrams daily is given orally starting with the sixth or seventh week reckoned from the start of the last menstrual period. The daily dose is increased by five milligrams at two-week intervals to the fifteenth week, and thereafter by five milligrams each week until the end of the thirty-fifth week, at which time the final dosage is 125 milligrams daily. It is stressed by the Smiths that the onset of clinical signs of late pregnancy disasters predicates a placental senility which already has become so well established that definitive treatment with stilbestrol is fruitless; its use, therefore, is recommended prophylactically only.

In summary, it appears that many obstetrical accidents may be prevented by diligence on the part of the physician. The anticipation of certain hazards in the path of successful completion of pregnancy should result in their avoidance and a decrease in the number of maternal and fetal tragedies. It is this attitude of *prevention* that is the concern of this paper. To this end, the following program is offered for routine prenatal care:

1. Encouragement to the patient to report to her physician as soon as the suspicion of pregnancy is entertained.
2. Careful history, conscientious physical examination to include examination of the pelvic organs and clinical pelvimetry as above advocated. A history of

prolonged labor terminated by mid-forceps delivery, unexplained stillbirth, the presence of prominent ischial spines, sacral deformity, and/or shortening of the internal pelvic diameters, abnormal fetal presentations at or near term, should call for roentgenologic aid. The present trend is toward routine X-ray pelvimetry in conjunction with clinical measurements.

3. Laboratory examinations should include routine hemoglobin and cell counts, a routine urinalysis, and a careful check on hemoglobin and urine throughout the pregnancy, to guard against the development of anemia or proteinuria. The value of routine blood pressure determinations needs no emphasis.

4. The regular employment of the vaginal smear seems to be on a sound basis, and its extension as a routine part of prenatal examination may be warranted.

5. Arrangements for a routine chest film should be made at the time of the first visit. The advent of the photoroentgen chest unit has brought this procedure down to a practical level in the screening of all pregnant women.

6. Every pregnant patient should have blood type and Rh factor determined at the start of her prenatal care, as well as routine serological tests.

- a. A careful history of previous transfusions as well as pregnancies should be obtained, and the possibility of Rh incompatibility entertained in the presence of a suggestive history, or if the donor's Rh factor cannot be determined. Naturally, only Rh negative blood should be used in transfusions of any Rh negative female before or during the reproductive period.
- b. All Rh negative multiparae and those previously transfused with Rh positive or unknown blood should be repeatedly tested for agglutinins and blocking antibodies, starting about the twenty-eighth week.

7. The coöperation of the patient should be enlisted in a program of controlled weight gain and nutrition.

- a. Those patients within normal weight values should be placed on a high protein, mineral, and vitamin diet, with restriction of carbohydrate and fat, and attention given to restriction of sodium and fluids, particularly in the last half of pregnancy. The caloric intake should be adjusted according to the individual needs of the patient, but should aim at a total weight gain of somewhere between 15 and 18 pounds over ideal weight.
- b. Those patients who cannot or will not coöperate as manifested by excessive weight gain, and those who enter pregnancy already obese, may make an improved showing if placed on one of the amphetamine-like compounds provided none of the contraindications to their use exist. The



obese patient should be placed on an even more drastic reduction in calories, as long as basic protein, mineral, and vitamin components are adequate, with actual weight reduction during pregnancy.

- c. The necessity of frequent visits is stressed in the management of patients whose rate of gain is out of control, either because of excessive fat deposit, fluid imbalance, or sodium retention. Edema should be vigorously combatted by raising protein intake, restriction of fluid, and imposition of salt poor or salt-free diet.

8. The improved fetal salvage and prevention of certain disasters in pregnancy shown to result from the prophylactic use of diethylstilbestrol definitely warrants its employment in those patients who exhibit a history of late pregnancy accidents and habitual or threatened abortion.

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#### Malignant Disease of the Larynx—Continued from page 207

C. C., age 65, throat discomfort, dysphagia, painful swallowing, dyspnoea, type ?, base of tongue, epiglottitis, larynx adenitis. First seen July 30, 1934. Dead 2 days.

T. M., age 73, hoarse 2 years, later dysphagia, painful swallowing, dyspnoea, type ?, larynx distorted with edema. First seen February 14, 1935. Dead 1 month.

#### CONCLUSIONS

1. Intrinsic carcinoma of the larynx is more amenable to surgery than carcinoma in any other part of the body if diagnosed early.

2. Chronic hoarseness should be investigated.

3. Smarting or burning, the sensation of something in the throat, something that the patient continually wants to swallow, difficult or painful swallowing may mean cancer of the larynx.

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The creation of adequate medical service must of necessity be the ultimate product of the co-working of many forces: enlightened local leadership, an informed and coöperative citizenry, a corps of well-trained doctors, and the financial resources necessary to enable these doctors to earn a living and to establish and maintain efficient hospital services.—*Medicine in*

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## ACUTE APPENDICITIS WITH PERFORATION: A REVIEW OF THIRTY-THREE CASES

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This paper is a report of a series of patients with acute ruptured appendicitis treated at the Maine General Hospital from January 1, 1942, to January 1, 1947. Over this five-year period, there were thirty-three cases treated. Twenty-four of these cases were private surgical patients and nine were ward service cases. In selecting cases for this paper, we have taken only those that met at least one of the following three criteria:

- (a) a positive culture of the peritoneal cavity,
- (b) a perforation described by the surgeon at the time of operation,
- (c) a perforation described by the pathologist.

There were six cases that met only the first criterion. These cases were included because we feel that a positive culture of the colon bacillus is indicative of a badly diseased appendix whose walls are permeable to organisms and that these patients are suffering from the same disease as those with a definite rupture.

The treatment of acute appendicitis without rupture is straight-forward. However, acute appendicitis with rupture offers a different problem. The treatment is still variable and this paper makes no new or startling suggestions. We have analysed our cases from the standpoint of symptoms, physical findings, operative treatment and post-operative results.

### SYMPTOMS

The majority of these patients had a clinical history that made the diagnosis of rupture of the appendix obvious. However, several gave a history which was not wholly consistent with the diagnosis.

Homans<sup>1</sup> states that the acute appendicitis is usually ushered in by generalized abdominal pain which is crampy in character. It may be simply a nagging discomfort or an unbearably severe colicky pain. In a matter of a few hours the patient has nausea and vomiting with slight to high temperature elevation. This is followed in a few hours by right lower quadrant localization. Keyes<sup>2</sup> points out that the onset of the pain is gradual and is hardly noticed at first. The pain grows in intensity and is aggravated by jolting. When the pain becomes severe it causes nausea and vomiting. Keyes feels that the order is important. In true appendicitis the pain is always noticed by the patient before the nausea and vomiting. The bowels are usually constipated although they may move sev-

eral times. Cope<sup>3</sup> feels that the so-called "textbook picture" is indicative of a late stage and the diagnosis should be made and treatment instigated before this stage. Unfortunately most patients delay some time before calling a doctor although public education has helped. Tashiro and Zininger<sup>4</sup> in reviewing nine hundred and thirty-six cases from 1939 to 1943, report an average delay in hospitalization of twenty-six and six-tenths hours as compared to a delay of thirty-one and one-tenth hours in the five-year period from 1935 to 1939. In perforated cases, the delay was seventy-five and six-tenths hours. By careful physical examination and history the doctor can prevent many cases from going on to rupture and peritonitis.

Twenty-four cases in our series stated that their attack began with generalized abdominal pain. The onset of the pain was roughly from twenty-four to seventy-two hours prior to admission. Twenty-three patients stated they had nausea and vomiting about twelve hours after the onset of the generalized abdominal pain. The nausea and vomiting was followed in a few hours by right lower quadrant localization.

Some patients gave a more atypical history. Children are very apt to present a deceptive picture. Garcia<sup>5</sup> reported a series in which three children were observed with pain in the midline or slightly to the left. This is often misinterpreted because the pain cannot be elicited elsewhere in the abdomen. There was no right lower quadrant localization in his cases. There were three cases in our series that complained of left-sided pain. One was a four and one-half year old girl, the second a nine-year-old male and the third a twenty-two-year-old male. The pain and tenderness in the left side seems to bear no relationship to the location of the appendix. Our three cases had appendices in the normal anatomical location.

There were a number of less common symptoms. Three had their illness ushered in by diarrhea and two by abdominal distension. Both patients with abdominal distension were elderly males. Patients in this age group frequently have poorly localized pain and they do not appear ill. Simpson<sup>6</sup> emphasizes this fact and points out that these patients are frequently considered cases of subacute obstruction and are treated as such. Consequently valuable time may be lost.

It is interesting to note that sixteen patients took cathartics and nine took repeated enemata. Keyes<sup>7</sup> states that the original pain gives the patient a feeling of gas stoppage and in his series eighty per cent

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of the patients resorted to cathartics or repeated enemata in an attempt to have a bowel movement.

### PHYSICAL FINDINGS

The temperature in the early stages of the disease is usually normal or only slightly elevated. The temperature is elevated with rupture and consequent soiling. One patient in our series had a normal temperature on admission. Ten patients had temperatures ranging from ninety-nine to one hundred-one by mouth. Twenty-two had temperatures above one hundred-one.

Similarly the pulse rate in the early stages is slightly if at all elevated. However, the pulse rate is persistently elevated when rupture occurs. Six had pulse rates from seventy to eighty, eight between eighty and ninety, ten between ninety and one hundred, six between one hundred and one hundred ten, three over one hundred ten.

The patients showed varying abdominal findings which were consistent with the degree of peritonitis that existed. Fourteen patients had generalized abdominal tenderness. All of these patients had perforations described by either the surgeon or the pathologist. All fourteen also had a large amount of frankly purulent fluid in the abdomen. Seven patients had what was described as "boardlike rigidity." Eighteen patients had tenderness limited to the right lower quadrant. Only twelve of this group had perforations described. However, the remaining six had positive cultures in the peritoneal cavity.

Inflammation of the appendix frequently leads to gaseous distension of the cecum. This is particularly true if the appendix is retrocecal in location. Two patients had abdominal distension which was noticeable and recorded on the physical examination. In both of the cases the appendix was described by the surgeon as being retrocecal in position.

### LABORATORY DATA

The white count usually runs a parallel course with the fever and pulse rate. Early in the attack the white count is only slightly elevated. With perforation, the count is elevated to a more marked degree. Only one patient had a normal count. This one patient was treated conservatively.

### SURGICAL PROCEDURES

Thirty-two patients had operations. One patient was treated conservatively and returned at a later date for the removal of the appendix and a Meckel's diverticulum which was discovered at the time of operation.

(a) *Anesthesia*: In the surgical treatment of patients the choice of anesthesia is extremely important. The best anesthesia is "one that disturbs the patient's

immunologic processes the least, produces maximal relaxation, has a quieting effect on the motility of the gastro-intestinal tract and introduces the fewest post-operative complications."<sup>8</sup> Many authorities feel that spinal anesthesia meets most of these requirements and that it has a definite effect in lowering the mortality rate.<sup>14</sup> The conscious patient is less apt to aspirate gastric contents, although gastric contents should be evacuated when possible before anesthesia. Spinal anesthesia gives good relaxation, and therefore, is valuable in cases that are technically difficult. In children under twelve years, vinethene-ether sequence is an excellent type of anesthesia. Ten patients in this series had spinal anesthesia. Spinal anesthesia is technically difficult to use in very young patients and should not be used in the ill aged person.

Thirty-two patients had general anesthesia. Some authors<sup>8</sup> feel that convulsions are more common in general anesthetic patients. We had one patient who developed convulsion during anesthesia. This was a fifteen-year-old white female whose convulsion was controlled by intravenous pentothal. She recovered without sequelae. Lenahan and Elliot<sup>9</sup> think that convulsions are not due directly to the anesthesia. They think that several factors must be present simultaneously and in a certain ratio to produce convulsions. They list infection, fever, upset in acid-base balance, anesthesia, operative trauma, prolonged surgical procedure and humidity or lack of heat radiation. They consider it is particularly necessary to properly hydrate the young pyrexial patient.

(b) *Incision*: An equally important question is the choice of incision, and this has an important bearing on the post-operative morbidity and mortality. Five patients had operations done through the McBurney incision. This is particularly indicated where simple drainage is contemplated. Many authors<sup>8, 10, 11, 12</sup> feel that the McBurney incision is better and report a lower mortality and morbidity rate. With the appendix in its normal anatomical position it can be reached more easily through a McBurney incision with less handling of the intestines and soiling of the peritoneum. However, when the appendix is retrocecal in position, adequate exposure is difficult. If adequate exposure cannot be obtained, the abdomen can be re-entered through a right rectus approach and the original incision can be used for drainage purposes. A McBurney incision should not be enlarged to obtain more exposure. A right rectus or midline incision is the best in female patients in their reproductive years. A more adequate exploration of the pelvis can be carried out through such an incision. Murray<sup>13</sup> advocates the use of the transverse incision, and it can be used with little damage to the fascia, blood vessels and nerves. It gives good exposure and heals well with good cosmetic results. He feels that there is little danger of post-operative hernia. Twenty-seven cases in this series had right

rectus incisions. It is the policy on the surgical service to use the right rectus in preference to the McBurney incision.

(c) *Use of Antibiotics:* With the introduction of the sulfonamides, the surgeons began using the crystals in grossly infected peritoneal cavities. Dees<sup>23</sup> was probably the first to use sulfonamides in the peritoneal cavity and the Roosevelt Hospital group popularized the method in 1941.<sup>14</sup> While the feeling is by no means one hundred per cent in favor of the use of sulfonamides, various authors<sup>12, 14, 15, 16, 17</sup> report series in which they feel it has definitely lowered the mortality and morbidity. Sulfonamide crystals were used in the peritoneal cavity and in the wounds of twenty of our cases. Doses up to five grams were used and the crystals were sprinkled into the wound site. Jackson<sup>14</sup> advocates the use of an isotonic saline solution containing the crystals and this undoubtedly gives a more even distribution.

In nine of the cases sulfanilamide powder alone was used and in the remaining eleven sulfathiazole was used. Anglem and Clute<sup>18</sup> advocate a mixture of sulfanilamide and sulfathiazole. Throckmorton<sup>19, 20</sup> showed in experimental animals that sulfathiazole remains visible in the peritoneal cavity for three to six days after implantation whereas sulfanilamide disappears in six to twelve hours. They feel that a mixture of the two drugs should be used "because of the prolonged local effect due to slower absorption, its wider range of bacteriostatic activity and its more effective mobilization of cellular reaction." Jackson<sup>14</sup> feels that one large intraperitoneal dose is sufficient and does not give oral, intravenous or intramuscular sulfonamides post-operatively.

Sulfanilamide was used in the one fatal case in our series. However, the patient was a poor surgical risk and expired ten hours after operation. Of the twenty patients on whom sulfonamides were used, eleven or fifty-five per cent had morbid courses as compared to seven or fifty-eight per cent in the group that did not receive it. Of the twenty with sulfonamides, four or twenty per cent had complications as compared to three or twenty-five per cent in the untreated group.

Only one case had penicillin used in the peritoneal cavity. It is hard to evaluate the benefit, if any, in this particular instance. Some surgeons feel that penicillin causes adhesions.<sup>16</sup>

(d) *Drains:* Some surgeons still adhere to the old adage "when in doubt drain." Williamson and Rankin<sup>21</sup> give an extensive discussion on the use of drains. Warren<sup>10</sup> feels that a drain is the single most causative factor in the formation of fecal fistulae. Strauss and Lomarkin<sup>22</sup> showed that non-drainage is not an absolute guarantee against fecal fistulae. They found that one-half of one per cent developed fecal fistulae in spite of the fact that the peritoneum was sewed up tight. In Warren's series of twenty cases he had no fecal fistulae.<sup>10</sup> Ochsner and Johnston<sup>24</sup>

state that it is now generally agreed that unless there is localized abscess formation, peritoneal drainage not only does no good but may be harmful. They pack the wound with gauze and do not suture the skin. Meyer<sup>8</sup> reviewed the cases at the Cook County Hospital and showed that cases without drainage had a lower mortality rate although he feels that chemotherapy was largely responsible for the lowering of the rate. Williamson and Rankin<sup>21</sup> report a series of thirty-three patients in which a drain was used and the peritoneum closed down to the drain. Through and through sutures were then placed and the wound packed with gauze saturated with merthiolate and azochloramide. The patient was placed on his stomach on return to the ward and the foot of the bed elevated. They felt that adequate drainage was more easily obtained by this procedure. The wound was closed at a later date after drainage had ceased and all evidence of infection was gone. They obtained good wound healing with no post-operative herniae.

Twenty-six of our patients had drains to the appendiceal site and to the pelvis. Two had drains to the peritoneum only. Four had no drains. Drainage of the wound is another matter. In spite of all precautions the wound is infected and it should be drained above the peritoneum. We had no cases that developed fistulae although three had superficial draining sinuses at the time of discharge. Three cases had wound infections. Seven had pelvic abscesses which required drainage. All of these patients had drains and all had sulfonamide crystals used in the peritoneal cavity.

#### MORBIDITY

In determining morbidity we established a base line as follows: Any patient who ran a temperature of one hundred point four by mouth for two consecutive days after the first post-operative day was considered to have a morbid course. Using this criteria, fifteen or forty-seven per cent of the patients had morbid courses. Six or thirty per cent of the cases that had sulfonamides used in the peritoneal cavity in comparison to nine or seventy-five per cent of the untreated cases had morbid courses.

No attempt was made to compare the morbidity in the drained and undrained group. Only four patients were closed primarily and they all had elevated temperatures. However, none of these patients had any post-operative complications.

#### POST-OPERATIVE TREATMENT

General surgical principles were employed in treating these cases. All patients received parenteral fluids and four had blood transfusions. Ten patients had Wangenstein suction, eight with Levine tubes and two with Miller-Abbott tubes. There is no doubt that



patients with constant suction are less apt to develop post-operative distension and ileus. If the Levine tube is used early, it often does the job very well by preventing fluid from collecting in the stomach.

Nine patients were given sulfonamides intravenously and eleven received it by mouth. Eight patients had penicillin. With the easy access to penicillin at the present time practically all patients receive it. Six of the eight patients with penicillin had morbid courses. The dosage was usually twenty to thirty thousand units every three hours. Crile<sup>25</sup> reports a series of patients in which large doses of penicillin were given without operative intervention. He feels that doses of twenty to thirty thousand units are only slightly better than sulfonamides.

#### POST-OPERATIVE COMPLICATIONS

There were seven patients who had post-operative pelvic abscesses that required drainage. Each had drains to the appendiceal site and to the pelvis. The fact that patients develop pelvic abscesses in spite of chemotherapy shows that antibiotics is not the final answer although they have undoubtedly affected the mortality and morbidity rate.

There were three wound infections, all in patients with abdominal drains. One subsided without surgical drainage. The other two were opened surgically. One patient had post-operative atelectasis after general anesthesia.

#### MORTALITY

There was one fatal case in this series resulting in a mortality rate of three per cent. This was a four-year-old male who apparently had the onset of his symptoms only twenty-four hours before admission. He was operated upon four hours after admission after an attempt had been made to place him in proper electrolyte balance and hydration. Goodwin,<sup>26</sup> in 1928, reviewed the cases of acute appendicitis with and without rupture treated in the three largest hospitals in the State of Maine. From May until December of 1928, ninety-three cases of acute appendicitis with and without rupture were treated in the Maine General Hospital. The mortality in those with perforation was eighteen per cent.

#### SUMMARY

1. A series of thirty-three patients with appendiceal rupture and peritonitis is reviewed.
2. Symptoms, physical findings, and laboratory data are analyzed.
3. Spinal anesthesia is the anesthesia of choice in patients over twelve years of age. Vinethene—ether open drop is an excellent anesthesia in children.

4. Sulfonamides in the peritoneal cavity are probably beneficial.
5. Drainage of the peritoneal cavity is still a controversial subject but most authors feel that non-drainage lowers the mortality and leads to fewer post-operative complications.
6. There was a morbidity of forty-seven per cent in this series.
7. Post-operative complications were in the form of pelvic abscesses, wound infections, and atelectasis.
8. There was one fatal case producing a mortality rate of three per cent.

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DEPARTMENTAL

EPIDEMIC DIARRHEA OF THE NEWBORN

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Epidemic diarrhea of the newborn develops so insidiously that usually most hospitals find themselves frantically attempting to organize control methods after the epidemic has become widespread. The mortality has been as low as 0%, Roddy<sup>1</sup> and as high as 83%, Kimberly.<sup>2</sup> In a very complete review of the previously reported cases, Anderson and Nelson<sup>3</sup> stated that of 3065 cases previously reported, the mortality has been 43%. The etiology of the disease is still obscure; this becomes quite evident in review-

ing the organisms recovered from a number of epidemics which are listed in Chart I. More recent reports would indicate that there is probably a common etiological agent for all epidemic diarrhea of infants, and it is most probably a virus. Because of the graveness of this disease, it was felt that our experience with an epidemic, which occurred in the Maine General Hospital in August, 1945, was worthy of report.

CHART I

	Cases	Deaths	Mortality	Organisms Recovered
The Cradle—Chicago (Dick) <sup>7</sup>	81	27	33	S. Morgani
Michael Reese—Chicago (Jampolis) <sup>8</sup>	34	14	41	B. mucosae, Strep. hemo.
Sick Children—Toronto (Johnson) <sup>9</sup>	15	9	60	B. dispar.
Memphis Gen. (Dulaney) <sup>10</sup>			47	B. coli mutabile
Providence—Seattle <sup>11</sup>	23	14	61	Monilia
Milwaukee (Forbes) <sup>12</sup>	39	18	44	Strep. hemo.
St. Louis Co.—Clayton, Mo. (Costello) <sup>13</sup>	26	11	42	P. vulgaris
Touro Infirmary—New Orleans (Colvin) <sup>14</sup>	12	9	75	B. coli, B. aerogenes Strep. fecalis
Huntington, W. Va. (Lyons, etc.) <sup>15</sup>	16	5	45	Virus
Rochester, N. Y. (Lentike, etc.) <sup>5</sup>	50	3	6	? Virus

*Epidemiology:* Between the birth of the first infant who was discovered to have the disease, and the occurrence of the last case of the disease, there were 142 babies born. Twenty-six of these babies developed diarrhea, and there were two other infants admitted to the hospital who subsequently developed the disease. Of the total of 28 cases, 14 of these infants died. The newborn children of ward patients at this hospital are placed in Ward E nursery, while those of the private patients are placed in the Pavilion IV nursery. Each of these nurseries is separately staffed by graduate and student nurses, and are situated about 50 feet apart in the hospital, at almost corresponding levels, and can be reached by passing through two main corridor doors. It is significant, however, that the feedings and nipples for both nurseries are prepared and sterilized in the common Ward E formula room.

The first recognized case occurred in the Ward E

nursery on August 5, 1945, when the child was five days old. However, another infant born July 27, 1945, discharged from this hospital when ten days old, was subsequently admitted to another hospital ten days later, and died of infantile diarrhea five days later. The first case mentioned above was called to our attention when it passed five stools on the fifth day, described as very soft in consistency, and yellow in color. During the next few days the number of stools increased to eight per day, and became loose in texture. During this time several other babies in the same nursery developed similar symptoms, took their feedings poorly, and ceased gaining weight. The first death occurred on August 18, and on August 16, the first case was observed in the Pavillion IV nursery. By this time the epidemic had been recognized, and measures were taken to try to determine the causative agent. A visit to the local dairy supplying the cow's milk with which many of the babies were being fed revealed apparently adequate pasteurization procedures. Cultures were made of nipples and formulae,

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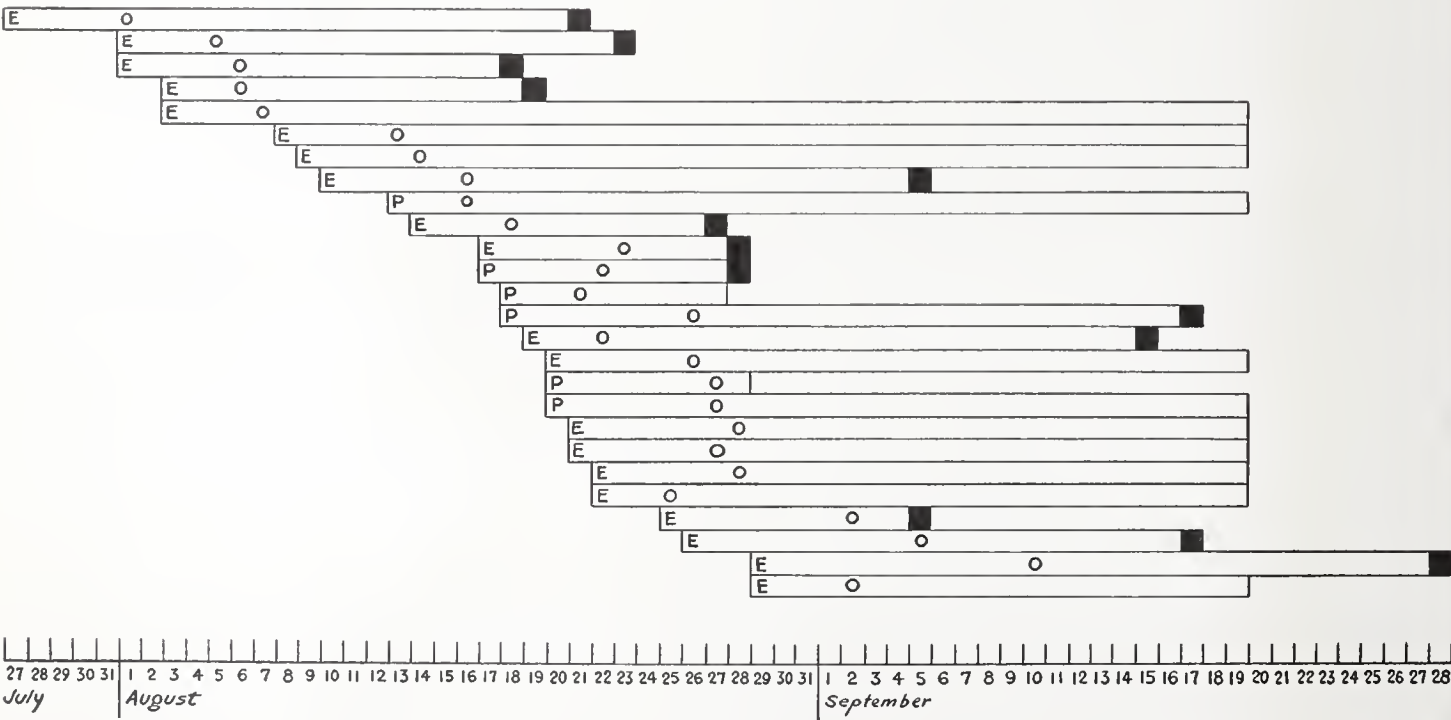
and were uniformly negative. Throat cultures of attending nurses showed no constant pathogenic micro-organism. Stool cultures from certain of the sick infants revealed *E. coli* only. Cultures were taken of various instruments and other articles in the nurseries and the delivery room, and in general, these showed an unsatisfactory degree of cleanliness. For example, a culture taken from the transfer forceps in one of the delivery rooms revealed a *Staphylococcus aureus hemolyticus*. An investigation revealed that the commercial sterilizing solution in which the forceps had stood had not been changed for a week. On another occasion, cultures were made from the hands of a student nurse who had just finished scrubbing and these revealed *Staphylococcus aureus* and *albus*. It must be mentioned in passing, however, that during 1945 this hospital was experiencing a shortage of nurses, with a corresponding undesirable degree of understaffing, and it is our feeling that the resulting faulty technique which accompanied the inevitable hurrying was in some degree, at least, partially responsible for the perpetuation, if not the outbreak of the epidemic.

On August 27, admissions to the Ward E nursery were suspended and all newborn babies were placed in a temporary auxiliary nursery. On August 30, the Pavillion IV nursery was vacated and cleaned, and all new babies placed in clean rooms which were originally intended for private patients. On September 1, the Ward E nursery was vacated, cleaned the

next day, and painted, and all newborn babies were then admitted to it, starting September 5. Separate formula rooms were installed in each new auxiliary nursery; it is significant that no new cases of diarrhea developed in any baby born after September 1.

It is also significant in discussing the epidemiology of this outbreak, that one of twin infants, for some reason which is not explainable, at the present time, was removed to Ward C, the part of the hospital which takes care of older children; in this ward, in which the baby was placed, there was another infant which had been operated for pyloric stenosis; this infant developed diarrhea, but while it was seriously ill for a period of time, eventually made a satisfactory convalescence. Clinical data: Most of the infants were being fed on a modified cow's milk formula at the time of the outbreak; others were receiving breast milk, dextrogen, or modified evaporated milk formula. There is no apparent relationship between the nature of the feeding and any susceptibility to the disease. The average age of the patient at the onset of the disease was seven days. The average duration in those cases in which death occurred was seven days following the first recognizable symptoms.

Chart II illustrates the increasing virulence of the organism, and shows a tendency of the shortening of the incubation period, as well as a decrease in the survival time after the disease became apparent.



As the epidemic progressed, there was a definite tendency for the disease to run a more fulminating course; at the height of the epidemic two infants succumbed after illnesses of three and four days respectively. The disease picture was one of diarrhea, with progressive dehydration and weakness; the stools were moderately frequent, averaging 6-8 per day, and generally soft and liquid in nature; in only one instance was any blood noted; mucus was not prominent. The patients became listless, took their feedings poorly, and appeared quite ill. During the early stages of the disease rectal temperatures over 105 degrees were uncommon; terminally a rise to 103 degrees or 104 degrees was frequently observed. Distension occurred in about half the patients, and was severe in two or three. Vomiting was fairly frequent, particularly terminally, and terminal aspiration pneumonia was apparently the cause of death in many of these infants. Therapy was directed toward maintaining an adequate degree of hydration, and a concerted effort was made to correct the severe acidosis. Parenteral fluids were administered to some of the more severe cases with marked benefit. A large number of the infants were given intravenous and intramuscular injections of blood plasma.

#### AUTOPSY FINDINGS

Autopsy permission was obtained in nine of the fourteen cases in which death occurred. In eight of these nine cases extreme emaciation and dehydration was a striking feature. On microscopic examination of the body fat, particularly in the vicinity of the adrenal glands, the fat cells had reverted to the fetal type in which the cellular fat is markedly depleted. This state of emaciation and dehydration was constant with one exception, and that was a patient who was evidently recovering from this disease when he succumbed to bronchopneumonia.

*Lungs:* The lungs showed bronchopneumonia in three cases, and in four cases it was definitely the aspirational type. On microscopic examination the bronchioles and alveolar ducts were filled with a relatively large amount of amorphous debris, obviously containing milk, and which gave a stain for fat. Atelectasis was present to a fairly marked degree in three cases. In one case there was an embolic infarction of the left lower lobe by a thrombus which had evidently originated in the right renal vein.

*Heart:* Developmental defects of the heart were not noted in any of the cases. In general the myocardium in each case was brownish and of normal consistency. In one case there was some edema of the epicardial tissues. In no instance was there any evidence of inflammatory infiltration of the myocardium.

*Spleen:* Varied from three to fourteen grams in weight, and there was no apparent microscopic or gross pathology.

*Kidneys:* In two cases thrombosis of the renal vein was found. One of these cases showed unilateral and the other showed bilateral thrombosis. The kidneys in these cases were of normal size but showed deep congestion. This complication has been previously described. On microscopic examination of the vessels, there is found to be no evidence of inflammatory reaction in the wall. The thrombi were of fairly recent origin, and showed no evidence of organization. It is presumed that they formed in situ as the result of hemoconcentration.

*Intestinal Tract:* In seven of the nine cases there was a striking reddening of the mucosa of the jejunum and ileum with an injection of the serosal surface. Definite ulceration was not found in any case. Distension of the small bowel and stomach was noted in four instances. The colon was apparently normal in every case. Microscopic examination of the wall of the small intestine revealed a very marked degree of hyperemia and edema of the submucosa. Occasionally tiny foci of necrosis were found in the mucosa, but for the most part the changes in the mucosa began postmortem. In many of the sections there was a very appreciable loss of mucin from the surface epithelium.

*Brain:* The cranial cavity was examined in three instances, and in each case there was mild congestion of the vessels of the leptomeninges. Petechial hemorrhages were found in one case, but no perivascular leukocytic infiltration.

*Bacteriology:* Blood cultures at autopsies showed *Staphylococcus aureus* in four cases and *B. coli* in three. Cultures from the ileum showed *Staphylococcus aureus* in one case, and *B. coli* in seven. Cultures in the spleen from two cases showed *Staphylococcus aureus* in one, and *Staphylococcus albus* in the other. There were eight cultures of *Staphylococci* obtained, and an attempt was made to determine whether these organisms could have been responsible for this epidemic. There were eight various cultures submitted to the Department of Preventive Medicine at Harvard University.\* Some of these cultures were obtained antemortem from the throat and eyes of some of the patients. Of the entire group there was one obtained from the spleen at autopsy which was coagulose positive, and proved to be enterotoxic for kittens. All the remaining strains were coagulose negative.

\* We are indebted to George E. Foley from the Department of Preventive Medicine at Harvard University for his investigation into the enterotoxic property of these cultures for kittens.



## DISCUSSION

Numerous authors have described a variety of organisms which they felt were responsible for outbreaks of epidemic diarrhea in newborns; as previously mentioned these include many bacteria. The ineffectiveness of antibiotics would seem to favor the view that a virus may be the incriminating agent, however, a paper of Rubenstein and Foley<sup>18</sup> is most important from the standpoint of prevention. In their studies of a series of nineteen outbreaks in Massachusetts, reported to the Massachusetts Department of Health, it was felt that the problem rests with hospital administration. Their studies revealed an inadequacy in the nursing techniques and methods of preparing formulae. The ineffectiveness of certain disinfecting solutions was discovered in some of the hospitals, and they suggested that more careful attention be paid to the use of proper disinfecting solutions, and more careful attention be given to the supervision of nursing room techniques. Expert advice should be sought with respect to the use of adequate sterilizing agents, and the problem should not be left to the nurse with little knowledge of the principles and requirements of a safe and satisfactory antiseptic agent.

Since the etiology of epidemic diarrhea has not been definitely established, there is no specific therapeutic agent. The problem from a practical standpoint becomes one of prevention. Weymuller, Beck, and Ittner<sup>19</sup> described various circumstances which favor the development of the common type of nursery infection. 1. *Unnecessary contact with visitors, nurses and physicians.* 2. *Inadequate isolation of the infants from one another in the nursery.* 3. *Faulty technique for the prevention of the spread of contamination through — a. unsatisfactory nursing attirement; b. common bathing and common weighing facilities; c. inadequate facilities for sterilization of bottles, milk, mixtures, and other materials used in the care of infants; d. the common utility room; and e. the proximity of uncontaminated isolated units.*

Mayes<sup>20</sup> suggests that the disease may be the result of faulty metabolism resulting from a lack of proper intestinal flora. He feels that beneficial bacteria in the intestines may be obtained by breast feedings.

We do not feel that any clear, definite conclusions can be drawn from the bacteriological studies in our series. It is interesting that one strain was enterotoxic for kittens, but this ability in certain strains is not always correlated with clinical pathogenicity. Frequently, organisms isolated from various sources including *Staphylococcus albus* may be enterotoxic for kittens. Pathological studies demonstrated fairly uniform changes in the tissues, but could not be considered pathognomonic of the disease but rather the result of widespread sepsis. Probably the most

striking effect of this infection on the babies was the resulting dehydration and emaciation. There must have been, prior to death, a very marked catabolic activity, and also a resulting acidosis. The thromboses which are described above, were in all probability the result of dehydration and hemoconcentration. No inflammatory changes were found in any of the vessels which might account for the formation of a thrombus. When an epidemic does result the spread of the disease can be stopped only by instituting drastic measures. The nursery should be closed to all further admissions, and the sick babies should be moved to an isolation unit, staffed by personnel who will not come in contact with any other infants, and should be serviced by a separate formula room. If there is sufficient nursing personnel to allow new admissions to the hospital, then all new babies should be placed in a third nursery, again staffed by personnel who would have no contact with either of the other two nurseries, and also be supplied by a separate formula room. It has been suggested that when hospitals are considering future construction that the problem of isolation and adequate nurseries be considered.

## CONCLUSION

1. An epidemic of diarrhea of the newborn is reported in which the mortality was 50%.
2. Anatomical findings at autopsy in nine of fourteen cases was reported, and two of the cases with thrombosis of the renal vein are described.
3. Bacteriological findings at autopsy are described as showing a rather high incidence of *Staphylococcus aureus* in the blood and tissues of the fatal cases.

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*Continued on page 232*

## TWENTY YEARS' EXPERIENCE WITH CANCER OF THE CERVIX

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In 1926, the treatment of cancer of the uterine cervix was not well defined. Surgery, except in early cases where the disease was confined to a small area, had proved inadequate. The larger medical centers were turning to radium and deep X-ray therapy. Like all new remedies, the public believed a cure for malignancy had at last been found. The most advanced cases were first to be treated as it was felt the patient had nothing to lose.

Temporarily the improvement of the patient's condition was such that all medical centers, large and small, felt radium and X-ray should be available.

Equipment was expensive. Radium at this time cost about \$120.00 a milligram and few were trained in its use. A great deal of tissue damage was done to both the patient and the person administering the treatment.

Deep X-ray equipment suitable for this new type of therapy was in its infancy and of course trained Roentgenologists were not available except in the large centers where the experiments were carried on.

In 1926, Maine had a few scattered pioneers in Bangor, Augusta and Portland, but few felt that their experience had been such as to be considered specialists in the use of either X-ray or radium therapy. Also by this time experience had proven that treatment by these new agents was somewhat disappointing. They had not been the cure-all that the public had hoped for. However, they had been accepted as very helpful in the treatment of malignancy as a whole.

Like several other doctors I journeyed to Pittsburgh, Pa., where The Radium Chemical Company conducted a school for the use of radium element in medicine. The school opened with a good attendance, but within a few days the student body had become small. The complicated lectures by able physicists were too much for the average physician. It was only the knowledge that radium therapy came at the close of the session, that enabled me to stick it out. To be truthful I later attended two more courses in New York, where the Radium Company had transferred its offices, before I understood in a small way what was being said. Anyway I arranged for the purchase of some radium, which was still expensive, and returned to Portland to carry on as best I could. While the lectures were of great help, experience was needed to learn what your radium would do, how to make applications, estimate the extent of the disease, the prognosis and then await the results.

One of my early patients who was suffering from

an advanced carcinoma of the cervix said to me, "You must give up this type of work. It is too depressing." Later I made a diagnosis of the same condition of the cervix of her daughter. Fortunately for me she was treated in New York by a most competent specialist, because she died also. Had I lost two in one family I might have believed that the work was too depressing. However, the stimulation one gets from a "cure" or a several year cure compensates for the many deaths one has to experience.

Being somewhat of a pioneer in the use of radium in Maine I now am going over the records of Cancer of the Cervix I have treated. From the first case I have tried to keep a fairly complete history. I have had the unusual privilege of examining the patient before treatment, giving the treatment and then observing the results by periodic follow-up examinations.

I find that during the past twenty-three years I have treated just eight hundred, pathologically diagnosed, malignancies of the cervix. For statistics I have painfully, and I mean just that, reviewed the first five hundred and fifty cases. These are consecutive, and no one was refused treatment because of a too far advanced condition. Every one was given the benefit of a trial. I know of no more difficult task than to tell a patient "nothing more can be done for your good." One can be so mistaken. Many a hopeless case, seemingly, will obtain remarkable results, while others with what seems to be a good prognosis will die within a year. Some of the tables I have prepared will demonstrate this,—if one should care to read that far.

The five hundred and fifty cases also include private cases and service cases. The list also contains those treated by radium alone and those with the combination of radium and X-ray. Predominating in the earlier half of the list are cases treated by radium alone, as the hospitals at first were not equipped with the excellent X-ray facilities and trained personnel they now have. I cannot adequately express in words the fine results obtained by this department. Radium now complements the therapy of X-ray in the management of cancer of the cervix instead of X-ray complementing radium.

In the early period of radium therapy there were no organized clinics which low income patients could attend for a diagnosis, with the result that nearly all service admissions were advanced cases. This has changed. Most of the larger hospitals now have well organized and well staffed clinics, where patients are examined, biopsies and cytological tests are made, treatment arranged for and "follow-up" carried out.

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The Maine Cancer Society (1936) has been most active in educating the public for early diagnosis, giving aid to the clinics and aid and information to people unfamiliar with what is possible for their welfare.

This education of the public for earlier diagnosis, the newer methods for detection of early malignancy, the modern equipment now available for treatment, the trained personnel and the coöperation of all interested, to say nothing about future developments,

should make statistics in the next twenty years a far more favorable sheet.

The following charts are fairly self explanatory to the one who makes them, but if interested, I am sure one can find some of the statistics interesting. I hope so. At present I feel as if I would never attempt to repeat.

The following thirty patients are included in the list of those having died of cancer, but they did not die a cancer death:

No.	Name	Years Post Treatment	Cause of Death
60	Neville	2	Heart attack—sudden
70	Miller	13	Heart attack—sudden
94	Nason	2	Hypertension—260/120
108	Park	7	Cerebral hemorrhage
110	Somma	15	Cerebral hemorrhage
118	Wilkins	—	Paraldehyde poisoning
134	Buck	—	Tetanus
142	Buswell	13	Polycythemia
185	Morrill	—	Carcinoma of omentum, adenocarcinoma
208	Tambaurimo	—	Refused Insulin—died 2 weeks—Diabetes
226	Greene	2	Cardiac asthma
240	Beasley	5	Hypertension—240/100
260	Summer	Few days	Coronary, per autopsy—sudden
261	Gross	—	Cerebral hemorrhage
265	Peabody	8	Embolus (repair of vesico-vaginal fistula
266	Mealey	3 months	Radium in June: was 3 mos. pregnant—In September induced abortion and died; autopsy—no carcinoma
273	Holt	1	Cerebral hemorrhage
299	Skillin	—	Sudden, while in hospital—coronary
312	Crossman	—	Hypertensive heart disease
324	Welch	8	Lymphatic leukemia
330	Moriarty	4	Acute heart attack
345	Elwell	Few months	Acute attack asthma
348	Moffett	6	Heart attack
382	Rogers	7	Cancer of stomach
393	Robitaille	8	Chronic myocarditis
419	Taylor	—	Died Psychopathic Ward, Farrington Hospital
443	Arsenault	4	Hodgkins Disease
484	Driskell	—	Committed to Mattapan—Insane
485	Phinney	2	Coronary
525	Lacourse	6 months	Suddenly—coronary

NOTE:

No. 517—Bouchard—Was five months' pregnant; received radium and allowed to go to full term; had Caesarean and both fine; was to receive more radium and X-ray, but did not.

No. 529—Campbell—Received radium and X-ray. Three years later went to Osteopathic Hospital and was operated upon; died there April 7, 1947.

"NO TRACE"									
No.	Name	Age	Group	Date of Rx.	Symptom-free	Ra.	Treatment Ra. and X-R.	Prognosis	Remarks
1	Mitchell	65	III	1927	10 yrs.	Ra.		Fair	—
24	Ware	45	IV	1928	7 yrs.	Ra.		Bad	O. K. 1935
35	Sickles	47	III	1928	7 yrs.	Ra.		Poor	O. K. 1935
41	Shepherd	75	IV	1928	—	Ra.		Bad	—
84	Doyle	43	II	1931	5 yrs.	Ra.		Fair	O. K. 1935
103	Weir	56	IV	1933	—	Ra.		Poor	—
149	McIntosh	64	II	1934	—		Ra. and X-R.	Good	Living 1935
219	Coffin	34	III	1937	5 yrs.	Ra.		Fair	O. K. 1942
220	Trask	49	III	1937	7 yrs.		Ra. and X-R.	Fair	O. K. 1944
255	Powers	43	II	1938	7 yrs.		Ra. and X-R.	Fair	O. K. 1945
278	Ross	39	II	1938	7 yrs.		Ra. and X-R.	Fair	O. K. 1945
298	Reynolds	32	II	1939	6 yrs.	Ra.		Good	1945 working in shipyard
314	Carter	56	III	1939	—		Ra. and X-R.	Fair	O. K. 1941
341	Elliott	60	II	1940	5 yrs.	Ra.		Fair	O. K. 1945
352	Davis	29	III	1940	—		Ra. and X-R.	Fair	—
374	Mawrey	44	II	1941			Ra. and X-R.	Good	O. K. 1944
409	Lefferson	48	III	1942		Ra.		Fair	
417	Kilcollins	68	II	1942	2 yrs.		Ra. and X-R.	Good	Obese—diabetic
421	Hanlin	61	II	1942	2 yrs.	Ra.		Good	Hysterectomy — Adenocarcinoma — obese and diabetic
433	Southerland	46	III	1942	2 yrs.		Ra. and X-R.	Fair	O. K. 1944
467	Thurston	54	III	—	—	Ra.		Poor	
476	Copp	55	II	—	—		Ra. and X-R.	Good	T. C. 1949
479	Caron	38	II	1943		Ra.		Fair	T. C. 1949
492	Fitzpatrick	37	II	1943			Ra. and X-R.	Good	Hysterectomy
511	Hansen	28	II	1944			Ra. and X-R.	Good	(except age)
521	Chasse	73	III	1944		Ra.		Fair	

Many of the above may be living. Vital statistics, clinics, friends, returned or unanswered letters and house calls—all fail to give data. Some have remarried, some have left the State, and some are in institutions. The above is a list of 26 (4.7%) of the 550 patients whom I have been unable to locate. It may be reduced as time goes on, as known dead or known living are reported.

The following are patients living as of August, 1949, most of whom are symptom-free. Part were treated by radium only, and part by the combination of radium and X-ray:

This group was treated by radium or in combination with X-ray, and shows years survived to date:

YEARS:	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22
No. Pts.																		
Ra. only	6	3	5	1	5	4	7	7	3	2	1	1	*4	1	2	*2	2	2
No. Pts.																		
Ra. and X-R.	2	5	†10	8	13	‡8	11	2	2	1	2	§4	¶1					
Total																		
Rec. Both	8	8	15	9	18	12	18	9	5	3	3	5	5	1	2	2	2	2 = 127

\* One adenocarcinoma, Group I.

Two had hysterectomies, Group II.

† One adenocarcinoma and two months pregnant.

‡ One aged 25.

§ One adenocarcinoma, Group II.

One adenocarcinoma, Group III.

¶ One adenocarcinoma, Group II.

The prognosis of both groups prior to treatment was:

Good	Fair	Poor	Bad
65	51	7	4

Grouped prior to treatment:

Group I	Group II	Group III	Group IV
Treatment by Radium and X-ray:			
Group I	Group II	Group III	Group IV
0	50	19	0

Treatment by Radium alone:

Group I	Group II	Group III	Group IV
2	47	9	0
Total	2	97	28
			= 127



TOTAL FIVE-YEAR SALVAGE

This includes the still living (127) plus those shown as dead, but who lived five years or more following their treatment (53), and ten patients in the "No Trace" group known to have lived five or more years. This makes a total of 190 to have survived the five-year salvage period, or 34.5%.

Treated by radium alone :

Dead, 187 or 34% ; Living, 59 or 10.5%.

Treated by combination of radium and X-ray :

Dead, 210 or 38% ; Living, 69 or 12.5%.

Survival by treatment, 23%.

Number of patients treated but unable to trace: 26 or 4.7%.

In the two groups, i.e., treated by radium, or by radium and X-ray, and all of whom died there were:

Hysterectomies,	61 or 15.3%
Within 2 years of Rx.,	34 or 8.5%
Prior to 2 years,	27 or 6.8%
Fistulae—Recto-vaginal —8	
Vesico-vaginal—7	
—	15 or 2.7%

One fistula was present prior to treatment and healed following.

Colostomy,	1
Pregnancies,	1-3 mos.
Psychosis,	3
Overweight,	16
(Recorded since 1940 only)	
Diabetes,	12
Kahn+,	9
Glands in the left supra-clavicular space, revealing hopeless general metastasis,	4
550 patients with carcinoma of the cervix.	
300 were private patients.	
250 were service patients.	
397 are now dead—72%.	
127 are now living—23%.	
26 unable to trace (1949)—4.7%.	

PATHOLOGY

507—squamous cell.
36—adenocarcinoma—all but 5 died.
7—adenocanthoma—all of whom died.
Prognosis—prior to treatment :
53—Good.
162—Fair.
58—Poor.
72—Bad.
—
345—Total.

These were treated by radium alone, or by the combination of radium and X-ray. This group all died on or before August, 1949.

The patients treated by radium, or X-ray and radium, but who lived one year or less following this treatment equal 226, or 41%, of the total 550. This 550 total includes the 26 I was unable to trace.

The following table shows those patients treated by radium alone and those by radium and X-ray, who eventually died but survived five years or more :

BY RADIUM ALONE											
Years	5	6	7	8	11	12	13	15			
No. of pts.	8	7	1	4	2	3	2	1	=	28	

BY RADIUM PLUS X-RAY											
Years	5	6	7	8	9	12	13				
No. of pts.	4	7	6	5	1	1	1	=	25		

This total of 53 can be used in computing the five-year salvage.

The purpose of this table is to show the gamble with treatment. All eventually died, but :

1 lived 15 years
3 lived 13 years
4 lived 12 years
2 lived 11 years
2 lived 9 years
9 lived 8 years
7 lived 7 years
14 lived 6 years
24 lived 5 years
21 lived 4 years
21 lived 3 years
64 lived 2 years
225 (41%) lived 1 year or less
—
397—Total

GROUPS

T.C.—Tumor Clinics			
P.P.—Private Patients			
Group I :			
Living	T.C.	0	
	P.P.	2	2 living
Dead	T.C.	1	
	P.P.	4	5 dead
Total		7	
Group II :			
Living	T.C.	36	
	P.P.	41	77 living
Dead	T.C.	57	
	P.P.	73	130 dead
Total		207	
Group III :			
Living	T.C.	18	
	P.P.	28	46 living
Dead	T.C.	89	
	P.P.	103	192 dead
Total		238	

Group IV :			
Living	T.C.	1	
	P.P.	1	2 living
Dead	T.C.	27	
	P.P.	43	70 dead
Total		72	

No TRACE

Group I :			
	T.C.	0	
	P.P.	0	

Group II :			
	T.C.	6	
	P.P.	7	
Total		13	

Group III :			
	T.C.	8	
	P.P.	2	
Total		10	

Group IV :			
	T.C.	1	
	P.P.	2	
Total		3	

The following table splits the total series into private and service or tumor clinic patients :

Living cases :			
	T.C.	54	
	P.P.	73	
Total		127	
Dead :			
	T.C.	175	
	P.P.	222	
Total		397	
No trace :			
	T.C.	16	
	P.P.	10	
Total		26	
—550			

AGES

Age 20-30 :			
Living	T.C.	2	
	P.P.	1	3 living
Dead	T.C.	8	
	P.P.	3	11 dead
Total		14	
Age 30-40 :			
Living	T.C.	11	
	P.P.	17	28 living
Dead	T.C.	34	
	P.P.	25	59 dead
Total		87	
Age 40-50 :			
Living	T.C.	11	
	P.P.	18	29 living
Dead	T.C.	55	
	P.P.	61	116 dead
Total		145	

Age 50-60 :			
Living	T.C.	18	
	P.P.	17	35 living
Dead	T.C.	49	
	P.P.	62	111 dead
Total		146	

Age 60-70 :			
Living	T.C.	12	
	P.P.	18	30 living
Dead	T.C.	23	
	P.P.	52	75 dead
Total		105	

Age 70+ :			
Living	T.C.	1	
	P.P.	1	2 living
Dead	T.C.	3	
	P.P.	22	25 dead
Total		27	

No TRACE—BY AGE GROUPS

Age 20-30 :		
	T.C.	0
	P.P.	1
Age 30-40 :		
	T.C.	4
	P.P.	1
Age 40-50 :		
	T.C.	5
	P.P.	1
Age 50-60 :		
	T.C.	4
	P.P.	0
Age 60-70 :		
	T.C.	1
	P.P.	5
Age 70+ :		
	T.C.	2
	P.P.	2
Total		26

DEFINITION OF "GROUP" AS USED IN THESE STATISTICS

Grouping a patient is a more or less arbitrary means of expressing one's opinion as to the extent of the lesion or new growth. No two physicians could place the patients in exact groups. There are several rules for grouping. One of the first established was so simple that I have always followed it and have never considered it necessary to regroup my series to conform with the International or League of Nations grouping.

If, in my opinion, the lesion involves one lip only of the cervix it is placed in Group I. Because such cases are rarely seen this group is necessarily small and tends to swell Group II due to the fact that border line cases naturally fall into the next higher classification.

Continued on page 249



## ANESTHESIA FOR THE CARDIAC PATIENT

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Many patients with diseases amenable to surgical treatment have cardiovascular disease. Proper management requires coöperation between the surgeon, internist and anesthesiologist. Exact diagnosis of both the surgical condition and the coexisting heart disease is important to expedite operation. An electrocardiogram, although important, is no substitute for a careful history and physical examination. In some 30% coronary heart disease is missed unless it is sought for in a careful history. This may also be true of mild or impending congestive failure or in determining the functional capacity of the circulation. Indeed, symptoms which seem to indicate operation may be symptoms of an underlying cardiac condition.

Early rheumatic fever occasionally masks as an acute abdomen. Acute coronary occlusion or pericarditis may simulate biliary colic. Embolic or thrombotic abdominal episodes are notoriously deceptive and may or may not demand surgery.

When a surgical diagnosis is established, does the prognosis of the combined surgical and cardiovascular disease justify the surgery? Conservative management may be less effective, but in turn may provide comfort and prolong life when the patient's days are already numbered, and spare the frequently aged patient a stormy operative period and tedious convalescence.

After the diagnosis has been established and the decision has been made to operate upon a patient with cardiovascular disease, the next problem is that of the immediate hazard incurred by operation and anesthesia. Simple, reliable criteria for surgical and anesthetic care of each of the various types of cardiovascular disease have not been established. However, experience has taught certain general principles and precautions in the management of surgical patients with diseased hearts. Individuals with existing or impending congestive heart failure are probably best digitalized prior to operation, and if the situation is urgent, digitalization can be accomplished intravenously in a few minutes with 0.5 milligrams of crystalline strophanthine or ouabain. If no emergency exists, simpler and equally effective oral preparations may be used and time allowed for compensation.

In the anesthetic management of heart disease in general, every effort must be made to avoid the occurrence of three conditions: anoxia, sudden or prolonged hypotension, and increased myocardial irritability. The air passages must be kept open and a normal respiratory exchange maintained, if necessary

by intermittent pressure applied manually to the breathing bag of the anesthesia machine. The patient's inspired atmosphere should contain oxygen in at least fifty per cent concentration. Hypotension may be forestalled by proper replacement therapy before, during, and after operation, by careful handling of tissue, by hemostasis, and, on occasion, by the judicious use of selected pressor drugs. In the great majority of instances the avoidance of anoxia with care at all times is ample protection against the occurrence of a dangerous increase in myocardial irritability.

The intravenous administration of a solution of procaine, in one-tenth of one per cent concentration, during general anesthesia is sometimes useful in reducing myocardial irritability.<sup>1</sup>

Sufficient premedication should be administered to the cardiac patient to allay all apprehension, and impart a sense of well-being.

Generally speaking, when it is likely that anesthesia by local infiltration or regional nerve block will suffice for the contemplated operation, these are the methods of choice for the patient with heart disease. Such is by no means true with spinal anesthesia, a method which is particularly likely to produce a dangerous lowering of blood pressure.

### CORONARY INSUFFICIENCY

Patients whose histories suggest coronary insufficiency, or who display historical or electrocardiographic evidence of previous coronary occlusion, compose a large proportion of the patients under consideration. A sudden fall in blood pressure after the induction of spinal anesthesia for abdominal surgery is likely to produce myocardial anoxia in patients of this group. However, spinal anesthesia employing small doses of anesthetic drug in a reduced volume of solution, slowly injected, may be satisfactory for operations on the perineum or lower extremities. When spinal anesthesia is to be employed, its administration to patients with coronary disease should be preceded by the subcutaneous or intramuscular injection of fifty milligrams of ephedrine sulfate. The blood pressure must be observed meticulously, and early hypotension treated promptly by the intravenous administration of ten milligrams of ephedrine sulfate, repeated in three to five minutes if necessary. Inhalation of oxygen in at least fifty per cent concentration should always be employed along with spinal anesthesia for these patients.

For most patients with coronary disease minor procedures of short duration are best accomplished by the intravenous administration of sodium pentothal in two and one-half per cent concentration, providing simultaneously by means of an anesthesia machine, a high flow of pure oxygen, or nitrous oxide and oxygen, each in fifty per cent concentration. Morphine and atropine in the ratio of twenty-five to one should be employed for premedication. The use of curare in combination with pentothal may be a safe method of producing relaxation of skeletal musculature, providing the anesthetist is skillful and experienced in the use of the method. Curare is never safe to employ without the routine use of an anesthesia machine to supplement or control the respiratory exchange, employing high concentrations of oxygen. Pentothal is generally contraindicated by the presence of cardiac enlargement with dyspnea at rest, or by congestive heart failure.<sup>2</sup>

In most instances anesthesia by inhalation is preferred for long operations, and for procedures requiring relaxation of skeletal muscles, in the presence of coronary insufficiency. A rapid, smooth induction is important to avoid the burden of a prolonged stage of excitement, and the use of non-irritating agents may avoid dangerous anoxia due to laryngeal or bronchial spasm. When the danger of explosion is not unduly great, induction with cyclopropane is most satisfactory, using a closed system with a method of carbon dioxide absorption. After anesthesia has become established, a small amount of ether vapor may be added to reduce cardiac irritability and enhance muscular relaxation. Irregularities of the pulse during cyclopropane anesthesia should be treated by increasing the concentration of oxygen, to dilute the anesthetic mixture, and by the addition of ether vapor. Additional relaxation for abdominal surgery is readily obtained by the use of curare in small amounts, administered intravenously. The use of curare obviates the necessity of maintaining profound and shocking planes of surgical anesthesia. Intercostal nerve block, plus abdominal field block may be successfully employed in place of curare to reduce the total requirement of the general anesthetic, and to provide abdominal relaxation safely. Sodium pentothal may often be used in place of cyclopropane to provide a smooth induction without excitement. The slow administration of four to eight cubic centimeters of solution in two and one-half per cent concentration is generally adequate for induction of anesthesia. Rapid induction or the use of an excessive amount of sodium pentothal may reduce respiratory exchange considerably, thereby delaying the establishment of surgical anesthesia by inhalation, as well as producing anoxia.<sup>2</sup> The use of nitrous oxide in excess of fifty per cent concentration is contraindicated in the presence of coronary disease even for the brief period of induction.

## HYPERTENSION

The pathological physiology of patients with extreme degrees of chronic hypertension places them in a class similar to that of patients with coronary insufficiency. The chronic hypertensive patient has a persistent diastolic blood pressure of one hundred millimeters or more of mercury after a reasonable period of rest in bed. Vital organs, particularly the heart, brain and kidneys, have become dependent upon high systemic blood pressure for adequate nutrition and oxygenation, and tolerate poorly the precipitous fall in blood pressure which may accompany spinal anesthesia. If advanced myocardial disease is also present, as is often the case, sodium pentothal should be used with caution, to avoid the likelihood of an operating room fatality.<sup>3</sup> Blood pressures tend to become elevated occasionally during cyclopropane anesthesia; therefore some anesthesiologists restrict the use of this agent in hypertensive patients to the period of induction, and employ ether-oxygen for maintenance. Except as noted, the anesthetic management of patients with chronic hypertension is similar to that described for patients with coronary heart disease.

## RHEUMATIC HEART DISEASE

Patients with rheumatic or congenital heart disease generally tolerate operation and anesthesia surprisingly well, considering them as a group. The risks for patients with rheumatic heart disease have been shown to increase with the age of the patient, and are most serious for those with auricular fibrillation, cardiac enlargement and those with a high functional classification (that is, those who are unable to carry out much or any physical activity without symptoms of undue fatigue, palpitation, dyspnea or anginal pain).<sup>4</sup> Spinal anesthesia has been condemned by some authors for all patients with heart disease regardless of its type. In support of their viewpoint is evidence that a sharp fall in blood pressure, which may accompany spinal anesthesia, can produce premature systoles or other abnormal rhythms, even in the normal heart. Many anesthesiologists, however, prefer the risks of controlled spinal anesthesia for operations below the level of the umbilicus for most patients with valvular heart disease. The dangers of anoxemia and increased cardiac work that may be present during a stormy induction with general anesthesia may well justify their preference for spinal anesthesia, cautiously employed.

As a rule cyclopropane is satisfactory for patients with valvular cardiac defects. Its proper administration is attended by high concentrations of oxygen. The slow pulse commonly produced by cyclopropane favors diastolic filling of the cardiac chambers, making this anesthetic particularly useful in the presence of mitral stenosis.



The use of sodium pentothal is contraindicated during acute myocarditis or congestive heart failure. Otherwise in patients with valvular heart disease, pentothal may be carefully employed for brief minor procedures, provided an atmosphere which is rich in oxygen is also administered. Prior to anesthesia by inhalation with ether and oxygen pentothal in small amounts is useful as an agent for induction.

#### CONGESTIVE HEART FAILURE

On rare occasions it may be necessary to submit for operation in emergencies patients with congestive heart failure, or those in whom decompensation has occurred despite adequate digitalization. This is one class of patients with cardiac disease for whom spinal anesthesia, when it can be employed, is unquestionably the favored method over anesthesia by inhalation. The peripheral and splanchnic vasodilatation which accompanies paralysis of the lower segments of the sympathetic nervous system by spinal anesthesia serves as a "bloodless phlebotomy," reducing venous pressure, to the advantage of the decompensated heart.<sup>5</sup> Anesthesia by inhalation, on the other hand, tends to precipitate or aggravate pulmonary edema, which may develop in the operating room or during the immediate postoperative period. Spinal anesthesia is by no means a substitute for concerted efforts to restore compensation prior to operation, if time permits.

Occasionally amputation of an extremity is necessary as an emergency procedure, because of trauma or infection. If congestive heart failure or diabetes complicates the problem, the performance of "physiological amputation" by the use of refrigeration is most satisfactory, to delay operation until compensation of coexisting diseases has become established.<sup>6</sup> At least one strong tourniquet is secured tightly *below* the site of contemplated surgical amputation and the extremity up to, and including the tourniquet, is surrounded by ice until the time of operation. Several days may safely be allowed to elapse during which time the

patient is carefully prepared for operation. Low spinal or brachial block anesthesia is employed for the surgical procedure in most instances.

When congestive heart failure is present sodium pentothal, even in small amounts, is best avoided. Local or regional anesthesia should be employed in its stead when these methods are practicable. Otherwise cyclopropane is the anesthetic of choice for most minor procedures of short duration.

#### SUMMARY

The diagnosis and safe surgical management of patients with heart disease often demands the coordinated efforts of surgeon, internist and anesthesiologist.

The patient with cardiac disease deserves individual consideration in the selection of anesthetic agents and techniques. Experience with the anesthetic management of such patients has taught certain general principles, which are outlined.

The relationship of anesthesia to the commoner types of cardiovascular disease is discussed.

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The general public is more conscious of tuberculosis, of its symptoms, of its treatment and of its prognosis. Although the general outlook is now more cheerful, the patient and his family still fear the disease. Stigma and anxiety continue to be associated with it. A patient can be debilitated for life and be made an outcast from his own family and friends by an unsubstantiated and incorrect diagnosis of pulmonary tuberculosis.—Rubin H. Kaplan, M. D., and Louis Levin, M. D., *Jour. Missouri State Med. Assn.*, Jan., 1948.

Ideally, the patient orientation program (in a tuberculosis hospital) should be directed by a physician with the rare combination of the skills and knowledge of the doctor, nurse, psychologist, social worker, rehabilitation specialist, and special services specialist. Responsibility for the program cannot be made an "additional duty" for someone functioning primarily in another area, nor can it be delegated to the novice who is not yet professionally experienced for something "more important."—William B. Tollen, Ph.D., *VA Pamphlet*, 10-27, Oct., 1948.

## INTESTINAL OBSTRUCTION DUE TO ENTEROCHOLELITHIASIS

JOHN F. APPEL, M. D.\*

A review of the cases of intestinal obstruction due to enterocholelithiasis at the Maine General Hospital since 1938 shows that it occurs frequently enough to be considered in the differential diagnosis of acute abdominal conditions. That this condition carries with it a high mortality rate because of delayed diagnosis and consequent delayed adequate treatment should prompt the physician to make as early a diagnosis as possible.<sup>1</sup>

The purpose of this paper is to review briefly six cases of enterocholelithiasis with intestinal obstruction and to compare their clinical picture with that described in the current literature.

Case 1. J. B., age 76, female. CC: constipation. Patient was relatively well until ten days prior to admission when she became obstipated. Five days later she began vomiting, and this vomiting continued to the time of admission. Physical examination: T. 98.4, P. 72, BP 110/60. Dehydrated; having fecal vomiting. Abdomen: slight distension. No peristalsis heard except a high pitched tinkle. Marked tenderness in both lower quadrants with indefinite fullness in the right lower quadrant. W. B. C. 18,150 with 90% neutrophils; blood urea nitrogen 115 mg.%. Plain roentgenogram of the abdomen: marked intestinal obstruction involving mainly the small bowel. Provisional diagnosis: high intestinal obstruction, etiology undetermined; uremia with cerebral involvement, and marked dehydration.

Operation: On the third hospital day an exploratory laparotomy with Wetzel enterostomy was performed under gas-ether anaesthesia. The proximal portion of the small intestine up to approximately the ileo-jejunal junction was distended, hyperemic, slightly discolored, and hypertrophied. The bowel distal to this point was normal and collapsed. At the point of obstruction the bowel was cut one-third across and a fusiform gallstone measuring 4 cm. in length was evacuated. Wound was closed in the usual manner. On her 4th postoperative day she contracted a bronchopneumonia of her right lower lobe region. She responded well to penicillin therapy, and her blood urea nitrogen fell progressively, finally reaching 9 mg.%. She was discharged from the hospital on her 35th hospital day.

Comments: This case represents a typical gallstone ileus with diagnosis made at operation. Its management is generally commendable. General anaesthesia, however, is not generally approved<sup>2,3</sup> (spinal anaesthesia being preferred), and its use in this instance,

very likely, played some role in producing the complicating bronchopneumonia.

Case 2. I. S., age 66, female. CC: constipation. Two weeks prior to admission patient had inflammation of the urinary tract without gastrointestinal symptoms. Three days prior to admission she began having progressively severer constipation, and on the next day she had nausea and vomiting. She felt distended and noted severe pains in her abdomen. On the next day before admission she was seen by her local medical doctor who referred her to the hospital. Past medical history revealed that she passed a gallstone per rectum 2 years previously. Physical examination: T. 98.6, P. 100, BP 110/60. Tongue coated. Lungs: rales in right base. Abdomen: very obese. Tenderness over entire abdomen, greatest over right upper quadrant. Faint peristaltic sounds heard in places, especially over stomach. Rectal examination: negative. W. B. C. 11,500 with 82% neutrophils. Plain roentgenogram of the abdomen revealed four loops of dilated small bowel. No gas was seen in the large bowel except two small areas overlying the crest of the ilium. Impression: obstructing lesion involving ileum. Provisional diagnosis: intestinal obstruction of undetermined etiology.

Operation: On the 2nd hospital day a jejunotomy was performed. Five feet distal to the duodenum a large brown firm gallstone was located, proximal to which the small intestine was dilated and distal to which the bowel was contracted and small. The stone measured 2 cm. in diameter and 3 cm. in length. Though the bowel was dark, it was not gangrenous. Patient was too ill for investigation of the gall bladder. Wound was closed in the usual manner. Patient responded poorly postoperatively, became unconscious, and on her 10th postoperative day she had pulmonary edema. She expired later on this day.

Post mortem examination revealed: (1) cholecystitis; (2) cholelithiasis; (3) adhesions of gall bladder, colon, and duodenum; (4) spontaneous cholecystoduodenostomy; (5) remains of cholecystocolostomy; (6) pulmonary embolism, source undetermined. The gallstones obtained post mortem, when X-rayed, were of the density of soft tissue and showed practically no calcium density.

Comments: The more instructive feature of this case is the previous history of enterocholelithiasis which should have prompted a suspicion of gallstone ileus on this last admission. The general non-radiopaque quality of gallstones has been demonstrated.

Case 3. M. M., age 83. CC: nausea and vomiting. Senile patient was in her usual health until two hours

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prior to admission when she began having nausea, vomiting, and abdominal pain. The abdominal pains were low and crampy in nature; the vomitus was green and watery and on one occasion coffee-ground. The date of her last bowel movement was not known, though bowels were regular prior to present illness. Physical examination: T. 99.6. P. 110. BP 150/86. Tongue dry. Abdomen: asymmetrical, with bulging in left lower quadrant. There was moderate tenderness of all quadrants, greatest in the left lower quadrant. Liver was felt three fingers' breadth below the right costal margin. W. B. C. 14,750 with 89% neutrophiles. Roentgenogram of abdomen: none done. Provisional diagnosis: intestinal obstruction, partial, of undetermined etiology.

Operation: On the 3rd hospital day a ileotomy and removal of gallstone from the small intestine were performed. The appendix was found normal. At the junction of dilated and injected small bowel proximally and contracted ileum and large bowel distally a large hard gallstone was palpated and removed through a transverse incision. A large gallstone was also palpated in the gall bladder and duodenum. The patient did poorly postoperatively, expiring on her 6th postoperative day.

Post mortem examination revealed: (1) bronchopneumonia; (2) cholecystoduodenostomy (spontaneous); (3) enterocolic lithiasis; (4) enterotomy; (5) hydrothorax; (6) rheumatic endocarditis (mitral). Just proximal to the ileotomy was found a stone measuring 3.5 x 2.8 x 2.8 cm. and just distal to it a stone measuring 2.9 x 2.2 x 2.2 cm. with a faceted surface. Both of these appeared impacted.

Comments: This case illustrates the necessity of a thorough search for further gallstones in the bowel, even though the offending cause has been removed. It is quite probable in this case that the two impacted calculi seen at post mortem passed from the gall bladder and duodenum postoperatively.

Case 4. L. K., age 67, female. CC: nausea and vomiting. Four and a half months prior to admission patient required drainage of a perforated gall bladder and pericholecystic abscess. She had bile drainage for some time. She was admitted to the hospital for 3-day constant nausea, vomiting, and some abdominal distress. Physical examination: T. 99.6. P. 90. Abdomen: increased peristalsis over its entirety. Plain roentgenogram of the abdomen: findings represent an intestinal obstruction involving the small bowel which probably was only partial. Provisional diagnosis: intestinal obstruction due to adhesions. Treatment consisted of suction decompression. On her 8th hospital day she passed spontaneously per rectum a large amount of feces with a large gallstone. Course thereafter was uneventful.

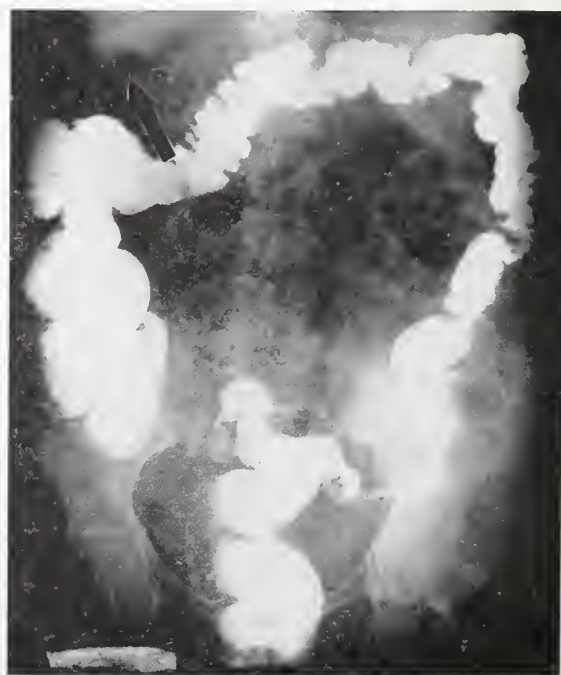
Comments: This unusual case shows that occasionally some patients may be treated successfully non-operatively. This mode of treatment, however,

is the exception and is not advisable in the greater number of cases.<sup>1, 4</sup>

Case 5. E. H., age 74, female. CC: vomiting. Patient was "always constipated," but constipation was severer several months prior to admission when it was accompanied by episodes of generalized abdominal pain. One week before admission she began vomiting a dark, bitter liquid material and was "unable to hold anything on her stomach." She had no bowel movements for a week before admission until the day before admission when she took an enema. Physical examination: T. 98.4. P. 90. BP 140/90. Abdomen: markedly distended, tympanitic; slight periumbilical tenderness. Active peristalsis. Rectal examination: negative. W. B. C. 8,450 with 80% neutrophiles; blood urea nitrogen 23 mg.%. Plain roentgenogram of the abdomen: partial intestinal obstruction. Provisional diagnosis: complete intestinal obstruction.

Course: Patient had no bowel movements and passed no gas per rectum. She was very uncoöperative, repeatedly pulling out her Miller Abbott tube. On her 6th hospital day she was "too ill to withstand a laparotomy." One observer was unable to account for her small bowel obstruction, but felt that "gallstone ileus, pancreatitis, mesenteric vascular occlusion should be considered along with other possibilities." She expired on the 6th hospital day.

Post mortem examination revealed: (1) gallstone ileus; (2) volvulus; (3) cholecystoduodenostomy (with stoma 2.5 cm. in diameter); (4) cholangitis; chronic cholecystitis; (6) atelectasis; (7) arteriosclerotic heart disease; (8) benign nephrosclerosis. Review of the plain abdominal roentgenogram revealed air sharply outlining the entire gall bladder.



Case 5: Barium enema, with visualization of the gall bladder by air. (Arrow points to gall bladder.)

Comments: This case exemplifies two didactic points. Firstly, the diagnostic feature of air in the biliary tree was overlooked. Secondly, gallstone ileus was suspected too late, that is, on the patient's 6th and final hospital day, when she was moribund and operation inexpedient.

Case 6. H. L., age 64, female. CC: abdominal pain. Patient had for several months prior to admission recurrent attacks of upper abdominal pains, without nausea and vomiting. One week prior to admission she had colicky upper abdominal pain, followed this time by persistent nausea and vomiting. She was "unable to keep anything on her stomach" and she had no bowel movements. Repeated enemata were ineffectual. Physical examination: T. 100.0. P. 120. R. 24. BP 110/75. Abdomen: soft bluish umbilical mass, having a boggy feeling and being moderately tender to palpation. Remainder of abdomen was soft and somewhat tympanitic. Rectal and pelvic examinations: negative. W. B. C. 22,400 with 90% neutrophils; blood urea nitrogen 60 mg.%. Plain roentgenogram of abdomen: definite small bowel dilatation appearing to be near the terminal ileum. There was practically no gas in the large bowel. Provisional diagnoses: acute small bowel obstruction due to strangulated umbilical hernia, dehydration, and mild uremia.

Operation: On the first day of admission a repair of the umbilical hernia, enterotomy, and removal of a 4 x 3 x 3 cm. cylindrical gallstone from the terminal ileum were performed. The bowel distal to the gallstone was found collapsed. The hernial sac was found to contain incarcerated omentum.

Comments: This case also reflects the difficulty of diagnosis of gallstone ileus. Obviously, with the clinical picture of strangulated umbilical hernia, enterocholelithiasis as a cause of the small bowel obstruction was not considered.

#### ADDITIONAL CASE OF ENTEROCHOLELITHIASIS, WITHOUT INTESTINAL OBSTRUCTION

Case 7. G. H., age 78, male. CC: vomiting. Following his pneumonia, 5 months prior to admission, patient was not in good health. Two months prior to admission he had dark stools; 1 month, beginning weight loss; 1 week, diarrhea; and 3 days, severe vomiting lasting 2 days. Physical examination: T. 98.0. P. 80. R. 36. Poorly nourished. Face very dry. Lungs: basal rales bilaterally. Abdomen: markedly distended with definite fluid wave. Band of dullness at and below umbilicus with tympany above and below this band. Rectal examination: negative. W. B. C. 14,050 with 85% neutrophils. Plain roentgenogram of the abdomen: no abnormal gas in small or large bowel. Number of rounded calcific areas measuring 1 cm. in diameter lying just above the iliac crest in one roentgenogram and in another, lying on

the left side of the abdomen. These were attributed to bismuth medication or other medication taken orally. Provisional diagnosis: intestinal obstruction of the splenic flexure of the colon, due to carcinoma.

Course: Patient did poorly, failing rapidly on his 3rd hospital day, despite supportive therapy. He expired on the 5th hospital day.

Post mortem examination revealed: (1) acute dilatation of the stomach; (2) adhesions of the gall bladder to duodenum, stomach, and liver; (3) spontaneous cholecystoduodenostomy; (4) cholelithiasis with passage of two gallstones into duodenum and two into rectum; (5) ? adenocarcinoma of gall bladder (tumor was poorly differentiated adenocarcinoma accompanied by necrosis, infringing upon and involving the wall of the duodenum; (6) metastases to liver; (7) bronchopneumonia; (8) arteriosclerotic heart disease with congestive failure.

Comments: This additional case is recorded because of several unusual features. It is the only male case of enterocholelithiasis in this hospital series. The rounded calcific areas on abdominal roentgenogram, suspected as being bismuth or other medication, may have been gallstones. The pathogenesis of the spontaneous cholecystoduodenostomy appears to be on a neoplastic basis.

#### GENERAL DISCUSSION

These six cases of gallstone ileus are quite representative. The elderly female is the most likely victim of this condition.<sup>5</sup> In this series of all females the average age is 71.7 years, with a range between 64 and 83 years. The mortality rate of 50% compares favorably with other series.<sup>2, 5, 6, 7, 8</sup>

The pathogenesis of enterocholelithiasis is well described by Foss and Summers<sup>2</sup> and others.<sup>5, 9</sup> The passage of a gallstone through a cholecystoenteric fistula into the intestinal tract is by far the commonest route.

Even despite thorough history, physical examination, and the use of laboratory aids, the preoperative diagnosis is very infrequently made.<sup>10, 11</sup> In the six cases of this series the diagnosis was made neither preoperatively nor premortem. Charles Mayo, moreover, states that "... the cause of obstruction (due to gallstone ileus) is usually not suspected before operation..."<sup>13</sup>

In only two of the reviewed cases has there been a previous history of gall bladder disease. Previous passage of an enterolith, e.g. in Case 2, should make one suspicious, on a subsequent episode of acute intestinal obstruction, of gallstone ileus.

Physical examination offers little for diagnosis.<sup>10</sup>

Roentgen abdominal examinations can be a definite aid in diagnosis.<sup>10, 14, 15</sup> Nitkin and Lesser<sup>12</sup> stress succinctly these points in roentgenological examina-



tion: 1) Air or contrast medium in the biliary tract; 2) Complete or partial intestinal obstruction, as noted by distended loops of bowel; 3) Visualization of the stone by a plain film, or by the ingestion of a barium meal, permitting the outlining of a radiolucent calculus; and 4) Change in position of a previously observed stone. In Case 5, it will be recalled, a review of the plain roentgenogram of the abdomen post mortem showed air sharply outlining the entire gall bladder.

The treatment of gallstone ileus is principally surgical.<sup>1, 5</sup> Decompression suction is not a replacement for, but rather an adjunct to, surgery. Kalvelage and Cangelosi<sup>1</sup> believe that early operation is indicated, especially if, after twelve hours with the use of decompression suction, there has been no relief of the obstruction. Prophylactic treatment, however, through early cholecystectomy before cholecysto-enteric fistulae form is highly recommended.

#### SUMMARY

1. Six proved cases of gallstone ileus have been reviewed and discussed.
2. The diagnosis of gallstone ileus has not been made preoperatively or postmortem in any of the six cases.
3. A more careful evaluation of the clinical picture including roentgen diagnosis should result in earlier diagnosis, more appropriate therapy, and finally further improvement in the mortality rate.

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#### *Epidemic Diarrhea of the Newborn—Continued from page 220*

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The tuberculosis mortality rate for 1947 was the lowest ever recorded in the United States. An even further reduction in the tuberculous death rate in

1948 is indicated by the estimated rate of 30.3, based on a 10 percent sample of death certificates.—Sara A. Lewis, *Pub. Health Rep.*, April 1, 1949.

## ADMINISTRATIVE

### STATE AID — THE ENIGMA OF HOSPITAL ADMINISTRATION

JOHN C. BARKER, Assistant Director, Maine General Hospital

"Oh, I can't pay my hospital bill,—the State will have to."

This answer to the Admitting Officer's inquiry as to how hospitalization expenses will be met is being given by such a large number of patients that many Maine hospitals are moving close to financial disaster for lack of sufficient income to meet minimum operating expenses. Such a statement may sound paradoxical to the average person. In fact, many of the patients, themselves, and the general public appear to regard the State Hospital Aid Program as some sort of a medical Santa Claus dealing out compensation from an inexhaustible fund to hospitals and doctors for the entire cost of medical care for those who either have not the wherewithal to pay or who feel they should not use their financial reserves for this purpose.

That it is by no means any such panacea is well understood by the physicians and surgeons of Maine who generously contribute, without compensation of any kind, large percentages of their professional time to the care of State Aid patients as well as by the hospitals whose combined income from the Hospital Aid Program and from the patients, themselves, fails to meet the cost of care by such a wide margin that the resulting loss threatens them with actual insolvency.

Unfortunately, such a misunderstanding does persist among the general public, however, whose beliefs vary all the way from an impression that so-called "State Aid" hospitals are State operated hospitals to a frequently expressed idea that the State annually underwrites the deficits of such hospitals. These misconceptions often arise through various patient referral sources such as welfare and social agency workers and sometimes family physicians, whose first concern is that the patient receive care rather than who pays the bill. Recommendations for hospitalization of medically indigent patients from these sources, therefore, sometimes unintentionally convey the impression that there need be no concern about expense since the State will foot the bill. The fact that the State pays only a small percentage of this expense and the search for some means of making up the deficit resulting from the free care of these patients constitutes the Number One financial problem of administering the voluntary, non-profit, community hospitals of Maine.

There seem to be only two approaches to a solution of this problem upon which the very existence of our

community hospitals depends. Either the contributing public which already gives generously, or the Legislature must find means of raising and providing greater aid to the medically indigent. Failing in these sources of additional income, hospitals must reduce the amount of care offered to deserving patients. Both avenues have been and are being explored and, although first attempts to obtain relief through increased legislative appropriation have failed, we must continue the efforts or face the alternative of denying the indigent sick hospital care. The full responsibility of this financial burden cannot be imposed on the paying patient by increasing the cost of private care or on hospital endowments and Community Chests which are increasingly inadequate to absorb the difference between present State payments and the actual cost of care.

That the medical profession is fully aware of this problem and wholeheartedly interested in its solution is evident from the action of the Maine Medical Association House of Delegates when, in 1948 session, it passed a resolution supporting the Maine Hospital Association in its attempt to obtain a more adequate appropriation from the 94th Legislature for the Hospital Aid Program.

In order that the critical need for continuation of this support through both individual and organizational effort by the physicians of Maine may be more fully appreciated, a brief outline of the aims, accomplishments, and shortcomings of the Hospital Aid Program from the viewpoint of hospital administration may be helpful.

The intent of the Law establishing Hospital Aid "is . . . to prevent pauperization by assisting hospitals to give necessary treatment to residents of the State who are managing to support themselves and their families but cannot meet the added burden of hospital bills without assistance." Almost any individual who has lived in Maine for one year and can demonstrate a need for financial assistance in meeting the cost of hospital care is eligible to make application for this aid. The principle ineligible exceptions are (1) individuals who have received general relief within three months prior to hospital admission, the cost of whose medical care becomes a responsibility of the community in which they reside, and (2) chronic and incurable cases where a long period of treatment is necessary. The need for actual medical or surgical care is a condition to eligibility and boarding or nursing care cases are not accepted.



Applications for assistance are made through the hospital with the chief responsibility for determining eligibility of the patient usually falling upon the admitting officer. These applications are carefully reviewed by the Division of Hospital Services at Augusta where the judgment of the hospital regarding eligibility of the applicant is either confirmed or questioned. As a result of the knowledge and accuracy of the admitting officer in determining eligibility for State Aid at the time of application, the judgment of the hospital is questioned in only the most border line cases and the number of rejected applications is a very small fraction of one per cent of the total.

The responsibility for the selection of eligible applicants is not a light one. The almost standard statement quoted as the first sentence in this article is completely sincere in most cases and a few routine questions usually confirm beyond doubt that the patient needs the assistance he requests. In all too many cases, however, the growing national philosophy of planned security from cradle to grave is evident when this reply carries an inflection which as much as says, "I am not going to reveal any assets that I may have and I am not going to pay my hospital bill, — so what?" It is easy to advise that such patients be refused admission but no hospital wishes to deny needed service; neither can it afford a large enough staff of credit investigators to ferret out hidden personal assets, uncover working children or relatives who could but don't want to help with the patient's expenses, or otherwise provide financial facts that will substantiate the admitting officer's often well-founded but unprovable opinion that the patient intends to get a free ride when, with a little sacrifice, he could pay all or part of his way. Fortunately, these cases are not in the majority but, added to the already heavy load of worthy indigents, they can very readily constitute the proverbial straw that finally breaks the camel's back.

Just how much financial assistance for all of these patients who average to pay, at the Maine General Hospital, only fifty cents per day toward the cost of their own care, does the State contribute?

The Legislature presently appropriates \$578,000 annually for the Hospital Aid Program. This amount is quartered and divided by the total number of days of care rendered by the hospitals of Maine during a three-month period to patients whose applications had been accepted. The resulting figure constitutes the per diem rate at which Maine hospitals are reimbursed for the care of State Aid patients during that calendar quarter. This rate is refigured every three months and, since the amount of the appropriation remains constant, the per diem rate varies up or down inversely with the number of days of patient care rendered under the Program.

A review of the 1948 income available to the Maine General Hospital, including the Children's Division, reveals the following situation:

Income	Per Patient Day	Total <sup>1</sup>
From State Aid, <sup>2</sup>	\$ 4.168	\$159,359.
From Patients,	.497	18,910.
From Other Sources, <sup>3</sup>	3.321	127,083.
<hr/>		
Total Income,	\$ 7.986	\$305,352.
Hospital Cost, <sup>4</sup>	12.72	486,361.
<hr/>		
Loss to Hospital,	\$4.734	\$181,009.

Explanations:

1. 38,236 patient days of care were rendered to State Aid patients during 1948.
2. Average per diem rate for 1948.
3. Hospital endowments and Community Chest.
4. Computed from Reimbursable Cost Formula approved by both U. S. Government and American Hospital Association.

The loss of over \$180,000, after application of hospital funds of \$127,000 in one year, taken by one hospital in the care of State Aid patients speaks for itself. It represents the difference between survival and bankruptcy. Proportionate losses by other Maine hospitals participating in the Hospital Aid Program led to a coöperative presentation of facts to the 94th Legislature with a request that the present annual appropriation be increased to \$1,200,000. This amount, approximately double the present appropriation, would have permitted reimbursement to the hospitals of about 80% of the cost of care of State Aid patients and, when supplemented by revenue from endowments and Community Chests, would have enabled the hospitals to just about break even.

The failure of the 94th Legislature to make the necessary funds available is now a matter of history.

As a result of this failure, the Maine General Hospital has but one alternative: to provide services to the medically indigent in accordance with its financial resources. This means that in all non-emergency or elective cases, patients requiring financial assistance must be referred to the welfare departments of their home communities for written authorization of payment for hospitalization expenses before bookings can be made.

It is hoped that it will not long be necessary to continue this program. It is hoped that some solution may be found by which these patients will receive needed hospital care. This is our Number One hospital problem.

# WHY — MEDICAL RECORDS?

BARBARA K. MOODY, R. R. L.\*

A modern hospital consists of many departments all having as their primary function the care of the patient. Yet in some of the departments a patient is seldom seen. Among these might be listed the Medical Record Department. Nevertheless, to the doctors, nurses, administrator and business office the Medical Record Department is extremely important; and it is essential to the care of the patient. In the discussion which follows I shall attempt to illustrate this statement.

The American College of Surgeons outlines six basic requirements for the Medical Record Department of an approved hospital. First there must be such a department conveniently located, adequate in size, and properly equipped. Second there must be efficient personnel, preferably headed by a librarian registered by the American Association of Medical Record Librarians. Third there must be a definite plan to secure medical records. Fourth there must be supervision of the medical records by the physician in charge of the patient, the medical records librarian and the medical records committee. Fifth there must be sufficient files and indexing systems. And sixth, there must be a monthly report to the medical staff showing work done in the department and a summary of the hospital services as outlined by the American College of Surgeons.

Before describing the Medical Record Department at the Maine General Hospital and the manner in which it conforms to the above requirements, let us consider the reasons for having medical record departments and the value of the medical records which are entrusted to their care.

A medical record has been described as a clear, concise, accurate history of a patient's life and illnesses up to and including the illness for which he is currently hospitalized, written from the medical point of view. The keeping of medical records can be traced back almost as far as the history of medicine itself, but records did not attain their present importance until a few decades ago. The very earliest medical records were bits of carving found on the clay tablets of Ninevah which scholars have determined represent descriptions of illnesses which befell those ancient peoples. Certain of the papyri found in the tombs and temples of Egypt are covered with hieroglyphics which represent accounts of operations performed by Egyptian surgeons as early as 3,000 B. C. Ruins of a temple dedicated to Aesculapius near Athens reveal that it had been used by the physicians of the time for the care of the sick and carved

on its pillars are the names and brief histories of the patients treated therein. These carvings roughly correspond to the Patient's Register kept by hospitals today.

Hippocrates, one of the first great medical teachers, recognized the importance of carefully recording his findings at the bedside. He is frequently pictured seated at the bedside of a patient writing on a tablet. His notes included all the details of the patient's condition, an impression of the case and an opinion as to its probable outcome. About five hundred years later Galen also emphasized the importance of making accurate reports of cases for future reference.

During the dark ages medical records were neglected although among the late Latin writings are found herbals and these became the manuals of the Benedictine Monks. As civilization spread and people congregated in cities, contagion spread and epidemics occurred. It became evident that special places must be set aside for the care of the sick. In 1130 A. D. St. Bartholomew's Hospital was founded in London and it has the distinction of being the oldest hospital still operating today. From the opening day a register listing the names of all the patients has been kept and as early as 1500 A. D. rules were established pertaining to the protection of its medical records.

The three oldest hospitals in America (The Pennsylvania Hospital, The New York Hospital, and The Massachusetts General Hospital) all had rules pertaining to medical records and the stories of their development closely parallel the histories of the hospital themselves. The early records were usually bound in hugh volumes and were seldom indexed by diagnosis or operation. The Maine General Hospital, established in 1868 kept its records in leather covered books from the opening date until 1914.

In 1918 with the establishment of the Hospital Standardization program by the American College of Surgeons, a Minimum Standard was set for medical records. Clause IV of the Manual of Hospital Standardization states:

"That accurate and complete records be written for all patients and filed in an accessible manner in the hospital, a complete medical record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations; such as consultations, clinical laboratory, X-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress

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notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings."

In 1928, the Association of Records Librarians of North America was organized with the object of "elevating the standards of clinical records in hospitals, dispensaries and other distinctly medical institutions." In 1933, a Board of Registration was appointed to formulate policies and examine candidates desiring to become medical record librarians.

An acceptable medical record today is a carefully prepared account of a patient's illness which serves him while ill, may be of further value if he becomes ill again, serves the hospital and the doctor, and has a definite place in the field of medical research. Essentially, a medical record is an orderly written report of the patient's complaint, history, physical examination, diagnostic findings, treatment and final results. These major divisions are detailed to include the patient's story of illness, past and family history, physical findings, laboratory and X-ray examinations, the use of other diagnostic methods, medical and surgical treatment, notes on progress in the course of treatment, and final diagnosis with end results when determined. The medical record is further supported by the necessary identification data, social history and nurse's notes. It is considered to be the property of the hospital but must always be available for the use of either patient or doctor. The medical record which has been developed is placed in the custody of the Medical Record Department which must correlate the results of the work of the other departments and assemble it in a form suitable for preservation.

The production of a medical record involves many different divisions and members of the hospital organization, and much of this work is accomplished before the record reaches the Medical Record Department. At the Maine General Hospital the first information for the medical record is obtained when the patient is interviewed by the Admitting Officer. She obtains the patient's name, address, age, place of birth, nearest relative, religion, occupation and financial status as well as details concerning his physical condition which help her to arrange for his admission to the proper division of the hospital. Most of this information is typed on a master card and copies are sent to all other departments of the hospital which might be concerned with the patient's subsequent care. From its copy, the Record Room obtains the information which appears on the front sheet of the record and the card is then placed in the Alphabetic Index which contains the names of all patients ever admitted to the hospital. Other information obtained by the Admitting Officer is recorded in the Admission Book or Patient's Register which is a numerical index of all patients ever admitted to the hospital.

As soon as the details of admission have been completed the patient is taken to the proper room or ward and his medical record is begun. The nurse sets up a

graphic chart and records temperature, pulse, respiration and other details. She also begins to record her observations on a sheet entitled "Nurse's Notes" with a description of the manner in which the patient was admitted (i.e. walking, by stretcher, etc.), his condition on arrival, disposition of clothes and so on. These "Notes" are continued by the nurses on duty throughout the patient's hospital stay and serve many purposes. Primarily they are a record of the patient's condition during the physician's absence. Upon the information recorded may depend the entire plan of treatment. It is not an overstatement to say that accurate results of treatment cannot be determined without correct and complete nurses' notes and that with the help of intelligently recorded bedside notes, the physician should be able to watch his patient's progress even though he visits the hospital but once a day. If no record were available it would be necessary for the nurse to make a verbal report of what had taken place, and as no one person is on duty twenty-four hours a day, this would be a physical impossibility. Nurses notes also serve as an indication of work done. They show that the nurse has performed the instructions of the physician and if used as evidence in a legal case, serve as protection to both the nurse and the physician. From the nursing standpoint, it is well for the nurse to record the temperatures of all solutions used, the condition on entrance of a patient, and adequate details of any accident which befalls a patient in the hospital.

As soon as possible after the patient's arrival he is visited by a member of the House Staff or his private physician who begins the medical part of the hospital record. This includes a detailed account of the patient's history, a summary of any previous illnesses, information regarding other members of the family and their health, and a review of all the "systems" of the body as related to the present illness. Next the physician will usually make a thorough examination of the patient and describe his findings. Finally, he will record his "Impression" or "Working Diagnosis" based on the history and examination. Before leaving the hospital the doctor makes out the necessary orders for laboratory studies he wishes made, medical treatment to be administered and nursing procedures to be carried out. When the history is taken by an intern, it may be followed by a similar note written by the Resident and Visiting Physician at the time of their examinations.

As the laboratory studies are completed, reports are sent to the ward and attached to the hospital record in chronological order. X-ray reports are also delivered to the proper floor and become a part of the medical record. Consultants who are asked to see the patient are expected to record their opinions on a page of the patient's chart.

In surgical cases the record is taken to the Operating Room with the patient and there the anesthetist

adds her report which includes the type of anesthesia given, pulse and respiration during the operation, and other pertinent information. At the completion of the operation the surgeon dictates an account of the procedure to a member of the Medical Record Department and after being signed this operative report is inserted in the medical record. Specimens removed at operation are sent to the pathological laboratory where they are studied and a gross and microscopic description of the tissue and pathological diagnosis are made by the pathologist. This report is also attached to the hospital record.

Throughout the patient's course the attending physicians note their opinions or suggestions regarding the patient's progress. Finally, a note is made signifying the patient is ready for discharge which includes a brief description of his condition and any recommendations for future care. This entry, when signed by the attending physician, constitutes an authorization for the patient's release. At this time the physician is expected to complete the front or Summary Sheet of the patient's record which has space for a brief summary of the entire hospital course, special treatments, complications, final diagnosis and condition on discharge as well as the physician's signature.

Should a patient insist upon leaving the hospital before his physician considers it advisable, he would be asked to sign a statement relieving the hospital of responsibility for his action. At the time of discharge, the patient's medical record is left in the Medical Record Department.

In the Medical Record Department each morning the records of patients discharged the previous day are collected, rearranged and prepared for permanent filing. On the ward the record was kept in the order most advantageous for the use of doctors or nurses constantly adding material to it. Now that the case is closed, it will be used as a unit and so is arranged chronologically with the earliest date on top. The identification or summary sheet appears first followed by temperature charts, history and physical examination, progress notes, X-ray reports, laboratory reports, anesthesia and operation sheets, special forms such as fracture sheets, doctor's order sheets and correspondence. The nurse's notes are carefully stapled together and placed in a folder with the record. Any laboratory reports or other sheets pertaining to the patient not already attached to the record are added at this time. As it is the duty of each department concerned with the care of the patient to make a report of its findings, so it is the function of the record department to collect this material so that it will be available when needed.

After being arranged and bound together each record is inspected quantitatively and any missing data noted on an "omission slip" attached to the front of the chart. Records which are incomplete are

placed in the responsible doctor's file for completion. Keeping records completed promptly by the doctors requires understanding and coöperation between medical staff and record department and backing by administrative bodies including the record committee, hospital director and medical board. The record librarian can point out to the administration wherein records do not meet standards, but after that good records become an administrative problem.

Records which are complete at the time of patient's discharge or which are later completed by the attending physician go to the cataloguing desk where the diagnosis and operation are indexed in accordance with the *Standard Nomenclature of Diseases and Operations*. Physicians are urged to record their final diagnoses to conform to this nomenclature so that every case can be located when desired. By means of the diagnosis and operation indexes it is possible for the record department to select the appropriate records for a physician desiring to study a group of cases having a particular diagnosis or operation. These group studies may include all patients with the given diagnosis who were admitted over a period of five, ten or even twenty years.

At stated intervals the records of certain patients discharged during a given period are sent to a service conference or staff meeting where they are examined from a qualitative standpoint or they are inspected by the members of the Medical Records Committee. To be acceptable, records must contain sufficient data, written in sequence of events to justify the diagnosis and warrant the treatment and end results. While a medical record can be checked for completeness by the medical record librarian, the appraisal of the quality of the medical records is the responsibility of the medical staff, usually through the medium of a medical records committee. At the staff meeting, cases of death, complications, infections or uncommon diagnoses are given special attention based on the accumulated evidence in the record to date.

Every record is checked by the Medical Record Librarian before being permanently filed and those of patients on service are approved by a member of the visiting staff. When these various inspections are completed the chart is filed by number until called for the benefit of the patient, doctor, hospital or medical science.

The hospital record may be of value to the patient in any one of the following ways: Today almost every patient has some form of Blue Cross or group insurance and the insurance companies will pay only after receiving reports from the patient's hospital record. In accident cases the hospital record is frequently the deciding factor in settling the case and as a last resort it may be summoned to court as evidence. It is because of this fact that doctors, nurses and others should be especially careful of the notations made on a record—stating only facts and avoid-



ing anything that might be questioned at some future date in court. The records of the hospital and the information obtained by the physician while attending a patient in the hospital are all of a confidential nature and cannot be disclosed without the consent of the patient. The use of the record for legal, insurance and compensation purposes is somewhat different from the medical use, and it should be carefully safeguarded so that the record will serve the best interests of the patient. The hospital does not seek to suppress information but it has no right to give out information without the authorization of the patient, or his legal guardian if a minor.

For the patient the record is of particular value if he should return to the hospital again or to another hospital. Tests which were done the first time may not have to be repeated if reports are available. Operative records can be studied before additional surgery is undertaken. Should the patient return to the Out-Patient Clinics for follow-up examinations the hospital record is always ready for reference if needed.

The hospital record may be of value to the physician in one of three ways. First as a means of reference before treating the patient he has never seen; or for reviewing the case of a former patient before treating him again. Second, as evidence in legal proceedings against him should he be accused of malpractice. And third, as an impersonal document if he desires to review a series of cases in order to study some particular disease or treatment.

As mentioned above, each of our records is indexed according to diagnosis and operation so that a doctor wishing to study a group of patients with leukemia, carcinoma of the cervix, etc., has only to request the type of case he wishes and they can be obtained for him. At the same time, we keep an index by physicians so that a doctor may ask to see all the records of patients treated by him and these can be easily located.

Such group studies constitute the fourth use of the medical record—as a basis for medical research and it is for this purpose that records have been kept since the Egyptian days. The majority of hospitals retain their records permanently and after a number of years the problem of storage becomes acute. To solve this difficulty the Maine General Hospital has undertaken the task of microfilming its records for cases which have been inactive more than five years. In this way we have been able to condense the contents of several hundred file drawers into the space occupied by one small file and still have all the important information contained in the original records available when necessary.

The hospital itself uses its medical records for evidence of work it has performed. The staff members study them for ways of improving the care given patients and to check errors in treatment, new methods of treatment and end results. In legal controversies

the record is often the only evidence which can be produced to show just what happened, particularly if doctors have moved, patients have died, and employees have changed. From statistical records kept by the Medical Record Department the hospital is able to furnish the necessary returns to the American Hospital Association, American College of Surgeons and other organizations which require evidence of the type and amount of service rendered the community.

Much of the success of the Medical Record Department of a hospital depends upon the record librarian. In a large hospital she will be aided by others who will be classified as assistant record librarians, stenographers or clerks. She should be a specialist in her field, able to take her place as the recognized head of an important department of the hospital, responsible directly to the administrative head of the institution. The medical staff, through its appointed record committee, should prescribe definite regulations pertaining to the compilation, completion and future use of the medical record; but the librarian is responsible to a great degree for knowing whether or not these regulations are carried out. Because the medical record is a composite document gathered from many departments, the medical record librarian must exhibit a spirit of coöperation towards all other heads of departments and in turn secure coöperation from them. In her association with the medical staff she must display tact, diplomacy and persistence. She must be prepared to offer all departments practical information which may be helpful in stimulating interest in medical records. Finally, the medical record librarian must be progressive, always desiring to increase her knowledge and experience, and seeking new ways in which to improve her department and keep in step with the advances in her special field. The medical record library will then assume its proper place as a department of equal importance to any other and essential to the proper functioning of the hospital itself.

#### SUMMARY

1. The history of medical records can be traced back to the early days of civilization. As long as men have studied the ills which befall them, they have realized the importance of recording their findings for the benefit of the men who follow. Today the keeping of adequate medical records is considered sufficiently important to be a factor in the approval or disapproval of a hospital by the American College of Surgeons.
2. Medical records, to be acceptable, must conform to certain standards and contain sufficient data to furnish information for the identification of the patient and justification for the diagnosis and end-

*Continued on page 243*

## MEDICAL SOCIAL SERVICE AT THE MAINE GENERAL HOSPITAL

ETHEL W. KLASSEN\*

The medical social service department of the Maine General Hospital functions for the benefit of the patient, hospital and community, and as in all branches of the social work field the emphasis is on casework service on a professional level. Casework service can be defined as the process of helping a person solve or adjust to a social or emotional problem which he cannot meet alone. There are many factors influencing illness and among them and of great importance are the patient's social and emotional conditions. Unfavorable social situations can produce illness and emotional conflicts can retard recovery. Years ago this was recognized by Dr. Richard Cabot at the Massachusetts General Hospital in Boston and under his supervision the first medical social service department was established. Since that time medical social service has developed rapidly and has proven invaluable in treatment of many types of illness, and in reducing the number of readmissions to the hospital.

It is common to think of social work only in terms of the indigent but many private patients request help from the medical social worker to meet problems that are not of a financial nature. Private physicians are beginning to refer an increasing number of cases to the medical social service department, as they become more aware of the vital role the social component plays in medical care.

As a means of illustrating medical social service within the hospital setting the following case is presented:

Several months ago, Mrs. T., a twenty-nine-year-old white woman, with severe lacerations of the scalp, was brought into the Accident Ward of the Maine General Hospital by her husband. Mr. T., obviously distraught, admitted to striking her about the head with an iron skillet while she lay sleeping. Why he did this he did not know nor could he remember the actual act of striking her. Mrs. T., luckily had awakened, screamed with fright, and fled. This brought Mr. T. back to his senses and he stood dazedly holding the skillet handle, having broken it from the pan in the violence of his attack.

Mrs. T. was X-rayed but suffered no fracture and her lacerations were treated and she was put to bed in the Accident Ward. The doctor referred the case to the hospital medical social worker for investigation and to arrange for Mr. T. to have a psychiatric examination in order to determine the cause of his temporary "black out."

The medical social worker, as part of the doctor-nurse-social worker team that coöperates in the treat-

ment of many patients, talked with Mr. T. alone and then with Mrs. T. alone. Both related substantially the same story. They had been married two years ago, each for the second time. Mr. T. had a flourishing poultry business and Mrs. T. worked by his side in caring for the chickens and marketing the produce. They were extremely happy and congenial and for about a year had an ideal relationship. Then, according to Mr. T., his wife began to have extra-marital affairs. According to Mrs. T., her husband began to suspect and accuse her of being intimate with the village storekeeper. This she stated with great sincerity was utterly fantastic; that she had never thought of anyone in that way since marrying Mr. T. and also the village storekeeper was a very happily married family man almost twice her age. In any event, Mr. T. became unreasonably jealous until Mrs. T. finally left him and returned to her family in Massachusetts. They remained estranged throughout the summer and divorce proceedings were begun by the husband. In the late Fall, however, a reconciliation was effected and Mrs. T. returned to Maine. The attack occurred on the second night of her return. Both Mr. and Mrs. T. stated that no misunderstanding or argument had preceded the attack.

Lying in bed in the Accident Ward, Mrs. T.'s presenting problem was whether or not to return to live with Mr. T. after she left the hospital. She was still very much in love with him and forgave him for attacking her, but she could not understand why he had done it and was afraid he might do it again. Mr. T. was more upset than his wife, and was suffering from guilt and remorse to such an extent that he was completely unnerved and could scarcely hold a cigarette in his trembling fingers. He was terrified at the thought that Mrs. T. would leave him again, and at the same time could understand her fear. He too was afraid of what he might do. Both Mr. and Mrs. T. needed help badly. It was at this point that the medical social worker took the initiative. Her first step was to reassure both of them. This was done by explaining that arrangements could be made for Mr. T. to receive a thorough examination by Dr. Q., who would probably be able to find out why he had attacked his wife, and possibly offer him treatment to prevent further episodes. Dr. Q. being a psychiatrist, the medical social worker had to proceed cautiously and interpret carefully just why such an examination seemed advisable. The very word psychiatrist connotes insanity to many lay people and great resistance to going to one must usually be overcome. Mr. T., with his wife's encouragement finally consented to go to Dr. Q. and the medical social worker telephoned

\* Social Service Department, Maine General Hospital.



Dr. Q. and made an appointment for late that afternoon. At Dr. Q.'s request the worker then made arrangements for Mr. T. to have an electro-encephalogram before his appointment so that psycho-motor epilepsy could be ruled out.

The results of the electro-encephalogram were within normal limits but a Rorschach revealed mental illness to such a severe degree that Dr. Q. recommended immediate institutionalization for shock therapy. Mr. T. lost his courage completely and spent the night pacing the floor and weeping. Mrs. T., still in the hospital, was too anxious and agitated to sleep. The medical social worker spent a good deal of time with Mrs. T., interpreting the meaning of Dr. Q.'s findings and trying to relieve her of the feelings of guilt she had developed regarding Mr. T.'s condition. She felt that she was partly to blame because she had encouraged him to go to the psychiatrist. The worker, of course, explained that the illness existed, whether or not it was revealed by a psychiatric examination, and that ignoring it would only make matters worse. Mrs. T. then wanted to know if Mr. T. would be completely cured after receiving shock treatment and if she would be able to live with him again without fear. In view of Mrs. T.'s many doubts and questions, arrangements were made for her to see Dr. Q. and discuss her husband with him. Mrs. T. was discharged from the hospital that day and went directly to Dr. Q.'s office.

Late that afternoon Mrs. T. came to the medical social worker's office at the hospital and wept uncontrollably for almost an hour. Dr. Q. had told her that her husband had marked paranoid tendencies which had begun to appear long before her marriage to him and which had grown progressively worse. Furthermore, Dr. Q. was not certain that shock therapy would cure him and was very doubtful whether it would be wise for her to go back to him ever. The worker listened sympathetically and tried to reassure Mrs. T. as much as possible. Finally, Mrs. T. asked if the worker thought it would be all right for her to go to Dr. Q. for treatment for herself. The worker stated that Mrs. T. must decide that question herself, but if she felt the need for psychiatric counsel she should certainly feel free to seek it. Mrs. T. emphasized that she was not "crazy" but just wanted to "get some things straight in her mind" and that she thought she would go. When Mrs. T. left the medical social worker's office she felt much better and more able to cope with her problems because she had been able to talk them over with someone sympathetic yet objective. She had benefited from catharsis.

Mr. and Mrs. T. are a closed case and their contact with the hospital was a brief one, but in two short days they received, between them, medical and nursing care, psychiatric treatment and medical-social casework service. The doctors, nurses and medical social worker coöperated in treating not only the lacerations that brought Mrs. T. to the hospital originally but the total situation surrounding the injury. The medical social worker, utilizing her casework skills and techniques, was able to provide the help Mr. and Mrs. T. needed in perhaps the most crucial point of their lives. Mr. and Mrs. T. presented one type of problem but multiply this case by the hundreds and add all the variables of human behavior, conflicts and fears and a fairly accurate picture can be gotten of what medical social service deals with in the Maine General Hospital.

A great number of cases require the coöperation of other community agencies such as the Public Welfare Department, Red Cross, Salvation Army and many others. During March, an average month, the Social Service Department contacted approximately 44 different community and State social agencies in handling a caseload of 126 patients. In addition, 19 other organizations and individuals, such as fraternal lodges and ministers, were contacted. The medical social worker spends approximately one-third of her time outside of the hospital making home visits and having conferences with other agencies in behalf of patients.

At physicians' requests home visits are made prior to the patient's discharge to investigate the home situation to see if it is favorable for convalescence. Many times discharge is delayed or other plans made because the medical social worker reports unfavorable conditions. After the patient is discharged the medical social worker often makes several home visits to learn of the patient's progress. Close coöperation with the Public Health Nursing Agencies is maintained in all cases requiring follow-up care after the patient leaves the hospital and returns to the community.

The following are the medical social casework statistics for the month of March. These figures illustrate the types of interviews and contacts involved in casework service, the services provided and, in some instances the tangible results achieved. The Social Service Department works with Clinic patients as well as those within the hospital and therefore these figures include both In and Out-patients.

*Continued on page 250*

# THE PROBLEM OF THE UNMARRIED MOTHER\*

RUTH M. DALTON\*\*

In 1882, when a group of women in Portland saw the need for a home for unmarried mothers and their babies, the Temporary Home for Women and Children was founded. It functioned as a home for unmarried mothers and their babies until February, 1948. A home for unmarried mothers is a home into which a girl may go a few months before her confinement and remain after the birth of her baby until a suitable plan is made for the baby and arrangements are made for the mother's future. Until the last war the Temporary Home was filled most of the time to capacity, but during the war years, for a number of reasons, the Home was hardly used at all. It was not because there were no unmarried mothers at that time. One of the reasons that the Home was not filled was that the girls were economically better off and could provide for themselves and their babies. Most girls were averse to being in a Home if they could possibly make any other arrangements. The Home itself was becoming old and the expense of maintaining it prohibitive. As only a few girls requested admission, it was decided to close and sell it.

However, the problem of the unmarried mother still existed and many of the social workers and district nurses became very much concerned with it. It was decided after a number of meetings of the Study Group of Unmarried Mothers of the Council of Social Agencies of Portland, that casework service was needed badly. It was felt that the Temporary Home should maintain an office at the Maine General Hospital and employ a full time caseworker. The reason for choosing the Maine General Hospital was that the only pre-natal clinic in the city is carried on there, with the exception of the City Dispensary which maintains a clinic for those receiving aid from the city. Therefore it was felt that the Maine General Hospital would be the most central location and the Hospital was most coöperative in supplying an office. In May, 1948, it was opened and a caseworker was employed. One can speak of the unmarried mother problem in general but to a caseworker each unmarried mother is an individual and her problem must be handled in a manner suitable to that individual. It is easy to understand that a girl who is going to have an illegitimate baby is in a disturbed emotional state, to put it mildly. Every girl is different — each one responds differently to her condition — but they are all emotionally upset.

\* This subject constitutes a part of the Social Service work at the Hospital and has been prepared as a separate paper by the Social Worker dealing with this problem.

\*\* Executive Director, Temporary Home for Women and Children, Portland, Maine.

Joan, an eighteen-year-old girl and her mother were referred to the worker by another agency. In the first interview, Joan's mother did most of the talking because Joan was too upset to speak. She wept throughout the entire interview. Her father and mother had a farm a few miles from Portland and Joan was the oldest of four children. When she finished High School she had obtained a position as a clerk in Portland and commuted from the farm. She had always been stable and reliable and she felt a great responsibility for her younger brothers and sisters. Her earnings were helping towards their education. She fell in love with a young man she met in her office. He was very attentive and she introduced him to her family with great pride. He was a guest many times at the farm and he was well liked by Joan's parents. The couple became engaged and planned to be married.

After Joan had had sexual relations with him he came to see her less often. She learned after a time she was pregnant and when she told him, he replied there was nothing he could do about it as he had been married for several years. In the early months of her pregnancy, Joan did not tell her parents. She was not afraid that they would not understand and try to help her, but she could not face hurting them. Her greatest fear was that her brothers and sisters would learn about her condition. She felt she had failed them as she wanted to be a good example to them, as she was the oldest.

When her parents learned about her pregnancy they contacted the young man but soon learned that he was a very different person than he had appeared to be. He had lied about everything but the fact that he was married which they were able to check with the records. It was decided not to bring court action against him because of the publicity.

Joan's guilt and remorse were so severe that she could hardly speak even after the worker had seen her a number of times. As she wanted to get away from home, arrangements were made for her to have her baby in another city. She gave the baby up for adoption. After she delivered, she returned to Portland and obtained another position. She was able to talk about her feelings a little better but the worker feels she will need a great deal of guidance for a long period of time. It would not be right for this girl to continue to have these guilty feelings over her mistake. She should not feel that her life is ruined and she has no right to a happy future. But the depth of her emotional disturbance was severe and it will take skill to help her to overcome her conflicts and rebuild her life.



The problem of the unmarried mother is a serious one in Maine and especially in Portland. At the present time, the figures for 1948 are not available, but in 1947 there were 863 recorded illegitimate babies born in Maine—there were 120 illegitimate babies born in the Maine General Hospital. Since May, 1948, 98 girls have been known to the caseworker. It has not always been necessary for the worker to do intensive casework on all of them for various reasons. Sometimes plans are made for the girls to leave town and arrangements are made by the worker for the girls to be seen by a social worker in the city to which she goes. Naturally when one has an unmarried mother, inevitably one has a baby with which to be concerned. Outside of her own emotional upset, the girl's greatest concern is the baby. She is faced with the decision of what to do — keep it or place it for adoption. Of the 66 babies born, 52 have been kept by the mothers and 14 placed for adoption. When a girl expresses the desire to become separated from her baby, she is referred to the proper agency, in Portland, the Child and Family Services or the Division of Child Welfare of the State Bureau of Health and Welfare.

The Temporary Home is supported by the Portland Community Chest, a special appropriation from the State and private endowments. The fact that a special appropriation is given by the State enables the Home to help girls from any part of the State who come to Portland seeking help. It enables the Home to help girls financially and since May, 1948, financial aid has been given to 34 persons including mothers and babies. One of the best ways to demonstrate how financial aid is utilized is illustrated in the following case:

Barbara, a nineteen-year-old quiet, reserved girl, was not known to me until after the delivery of her baby at the Maine General Hospital. She had received no prenatal care. She had come from New Hampshire to stay with her grandmother here in Portland. Her mother to whom she had been very attached was killed in an automobile accident five years ago. Her father re-married again and in a short while Barbara and her sister left home as life was made miserable for them by their step-mother. Barbara's sister got married and Barbara worked as a waitress and lived with her for a while. In time she met and fell in love with a young man who was married but had been deserted by his wife a year after his marriage. He was left with a son who was being

raised by his mother. He had a job with the railroad but could never save enough money to get a divorce. However, when Barbara became pregnant, he immediately started divorce proceedings as he wanted to marry her. Barbara felt she did not want to remain in her small town so she came to her grandmother in Portland. Her plan at the time the worker first talked with her was to board her baby and go out to work to support it. Her grandmother's health would not allow her to take care of the baby. Barbara only planned to work until she could get married. It was decided that it would be better for the baby and for Barbara and for the grandmother if Barbara could keep the baby at home and take care of it herself, instead of having to board it. So the Temporary Home paid Barbara enough so that she could stay at home with her baby. We did this for a few months until Barbara went back to New Hampshire to get married. She plans to return to Portland and obtain an apartment near her grandmother. Her husband is being transferred to Portland. We feel that by giving financial aid to Barbara we accomplished at least three things: we enabled Barbara to remain at home to care for her own baby at the time when the baby needed her most, we gave the baby a better start in life by virtue of the fact that it had its own mother's care and we were able to help the grandmother by letting Barbara remain in the home with her. For the first time since her mother's death Barbara had the security of a home and a family.

In looking back over the past year, one factor has been outstandingly noticeable by the caseworker. Many people, especially physicians, who see a number of unmarried mothers in private practice, have been under the impression that because the Temporary Home is a social agency that it gives its services only to the indigent group. One of the chief aims of the Home is to offer casework service to all unmarried mothers regardless of their financial status. It does not matter if an illegitimately pregnant girl has money or not, she is still in need of advice and guidance. She, too, needs help in making a plan for her baby. The caseworker is willing to help these girls at all times. At the present time, the Temporary Home has no facilities for boarding a girl who comes from outside of Portland and has no place to live. The Home is making arrangements to have such facilities in the future. However, if a girl can live with a friend or relative, the Home is able to pay her board.

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Exposure to fumes and gases could not be proved to favor the onset of tuberculosis; neither lead absorption and intoxication, nor mill dust and foundry employment are associated with the development of tuberculosis. High temperatures and humidity are

without significant influence upon tuberculosis, nor are any theoretical reasons advanced to the effect that they should be. Radiant heat in the steel industry causes no tuberculosis in those exposed.—Rutherford T. Johnstone, *Am. Rev. Tuberc.*, Oct., 1948.

# HOSPITAL DIETS AND DOCTORS

ELEANOR GRIMMER, Chief Dietitian, Maine General Hospital

Since dietary departments have been in existence, doctors, nurses, and dietitians have been working together in close harmony for the welfare of the hospital patient.

The hospital dietary department employs dietitians who are trained to help doctors in their daily treatment of patients. When a patient is to be instructed in what foods he is to eat and the reasons why, it is usually the dietitian who does this, for doctors are much too busy to sit down with each patient and go over a diet with him.

Physicians and dentists may call upon the dietary department when they have clinic patients who have to be instructed in special diets, such as: diabetic diets, pregnancy diets, high vitamin diets and many others. Here again there are so many patients to be seen that doctors can not spend the time instructing each clinic patient about his particular diet. Not only would a dietitian be useful in a clinic to instruct in special diets, but she would be of value in teaching clinic patients sound nutrition. It is surprising how few people today know what the basic foods are and how they should be used in planning a daily menu. When making medical rounds, the doctor should confer with the dietitian concerning the needs and preferences of the patient—in this way the department and patient gain in knowledge.

Classes for patients in special diets have been of great benefit in teaching patients food values accord-

ing to gram weights, as in diabetic cases, and caloric value, as in overweight patients. Doctors call upon dietitians to visit their patients who are not satisfied with the food served or who have certain allergies and have to be on a special diet. Here the dietitian proves to be very helpful in their aim to please the patient.

One of the duties of the dietary department is to instruct patients who are to be discharged from the hospital with a special diet. In most cases several days are required for a dietitian to acquaint a patient with his or her particular needs; therefore the doctor should notify the dietary department as soon as he knows the patient is to be discharged on a special diet—twenty-four hours at least in advance. This would give the patient opportunity for a thorough understanding of his diet, and also would give him an opportunity to express his preferences and discuss them in full with the dietitian.

Many hospitals today have the dietary department so arranged as to provide for teaching dietherapy to interns. This arrangement is helpful to all concerned, since it not only teaches the interns special diets and food values, but also acquaints them with the diet procedures of their hospital.

The dietitians in all cases are desirous of working in close coöperation with members of the medical staff in carrying out the primary objective of the hospital—care of the patient.

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## Why Medical Records?—Continued from page 238

- result. They are the composite result of the work of many departments assembled in a form suitable for preservation by the medical record librarian and her staff.
3. Medical records may be called upon for the use of patient, doctor, and hospital as personal documents and as impersonal documents for the compilation of statistics for research and study.
  4. With the development of the Medical Record Department, a new hospital specialty has been evolved—that of medical record librarian, a highly specialized field requiring technical training, hon-

esty, industry and progressiveness, personality and diplomacy.

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The proportion of deaths from tuberculosis among people over 45 years of age is steadily increasing.—

Robert J. Anderson, M. D., *Pub. Health Rep.*, April 1, 1949.



## THE PRESIDENT'S PAGE

The National Education campaign of the American Medical Association is apparently well under way.

Although the Maine Medical Association has been somewhat slow in getting started as compared with some of the other States, it is now going forward with its program. The state chairman of this campaign, Dr. Martyn A. Vickers of Bangor, has appointed a committee in each county to carry on the work.

These county committees have a tremendous task. The success of this state program depends on the interest and enthusiasm of each individual member of the Maine Medical Association.

The work of these committees is, in part, to arrange for speakers and to distribute the literature put out by the A. M. A.

Many of the members of the Maine Medical Association will be called upon for services in the near future. If the doctors of the State of Maine wish to retain their individualism and free enterprise in the practice of medicine, now is the time to show their personal responsibility and respond to the requests that will be made for their services in telling the people of Maine the facts in the case. It is certain that each member, knowing full well what conditions might exist under a Compulsory Health Insurance, will respond generously with his time, energy and talents to the call for assistance from these various committees.

RALPH A. GOODWIN, M. D.,  
*President, Maine Medical Association.*

## EDITORIALS

### The Council Votes to Hold Fall Clinical Session in Waterville

The summer meeting of the Council of the Maine Medical Association was held Sunday, August 14, at the summer home of the President, Dr. Ralph A. Goodwin, at Orr's Island, Maine.

It was voted to hold the Fall Clinical Session in Waterville, on November 6 and 7. Dr. Frederick T. Hill will be in charge of the program, which will include clinics at the Thayer Hospital, Sisters' Hospital, and the Central Maine Sanatorium. General meetings will be held at Colby College. The Sunday evening meeting will feature a discussion on Compulsory Health Insurance and will be open to the public.

The House of Delegates and the Council will meet Sunday, November 6; the time to be announced later. This meeting of the House of Delegates will be held in accordance with a vote of the House in session at Poland Spring, June 20, on recommendation of the Reference Committee. This meeting, and a later one in April, will enable the county delegates to familiarize themselves with problems confronting the Association and discuss them with the members of their respective county societies before the annual meeting in June.

Dr. Martyn A. Vickers of Bangor, State Chairman for the National Education Campaign, stated that the committee now consists of two or more members in each county, and two representatives from each of the following societies: the Maine Dental Society, the Maine Pharmaceutical Association, the Maine Hospital Association, and the Maine Nurses Association. He said that the committee members have been notified of three different tasks which are to be undertaken; 1) the distribution of material in their area, 2) the securing of endorsements or resolutions by any organization which is willing to adopt a resolution against socialized medicine, and, 3) the setting up of a Speakers' Bureau, which is the task first of the County Committee to obtain the volunteers and then the task of the Public Relations Committee to see that they have proper material and some coaching on their subject. He also stated that

pamphlets and large pictures of "The Doctor" have been sent to hospitals in Cumberland, York, Sagadahoc, Lincoln and Knox counties, and that the committee is now working through the Maine Hospital Association to do the same thing in the other counties in the State.

He said that he would like permission to send out an occasional Bulletin to the members of the Association to keep them informed relative to the work of his committee, and the Council authorized him to use \$200.00 from the fund allocated to Special Committees in the 1949-1950 budget, for this purpose.

On request from the Chicago and Washington offices of the American Medical Association, a telegram was sent to the Senators and Representatives from Maine, in opposition to President Truman's Reorganization Plan Number One, which would have set up a Department of Welfare, and we telephoned direct to Senators Smith and Brewster. The Council expressed their approval of this move, which had to be made without consulting Council members because of lack of time.

Dr. Eugene H. Drake, Chairman of the Health Insurance Committee, reported that eleven companies have submitted policies. The membership of the Maine Medical Association is 751. Of that number 417 are now participating doctors in the voluntary insurance plan sponsored by this Association. This is 55½% of the membership. A question and answer booklet has been prepared and has been submitted to one printer already for an estimate of cost. The definition of "gross income" has been set up as follows: "Gross income" of self-employed individuals, for the purposes of this Plan, shall mean that amount of income remaining after deduction of the ordinary and necessary expenses of doing business.

This meeting was well attended; all council members with one exception were present, and had as guests, Dr. Frederick T. Hill, Chairman of the Public Relations Committee, and Dr. Vickers. The business meeting was followed by dinner at the Jaquish Inn at Bailey's Island.



REORGANIZATION PLAN NO. 1 DEFEATED

The President's Reorganization Plan No. 1 has been defeated in the Senate by a vote of 60 to 32. Twenty-three Democrats joined with 37 Republicans to defeat the Plan. Action of one House is sufficient. The other House will not need to take any action. It probably means that the Senate considers health activities are of such importance that they should be conducted under a single department rather than in conjunction with other activities. It also may mean that the Senators

feared the plan as developed might be a step toward the adoption of socialized medicine.

WHAT CAN BE DONE?

1. Things can be left as they are.
2. The President can propose a new plan.
3. Senator Taft can advance his plan.
4. A bill can be drafted embodying the Hoover Commission's plan.

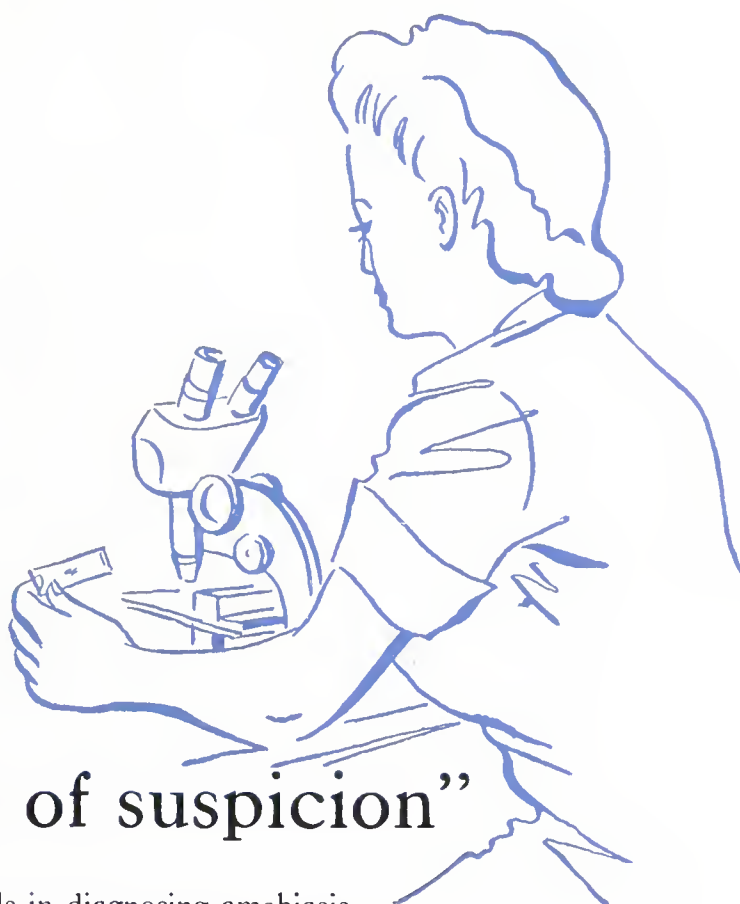
In the meantime, we can continue to explain to the public generally our program which after all is fundamental to any plan that may be devised.

THE 95TH ANNUAL SESSION GOLF TOURNAMENT

Dr. Francis A. Winchenbach of Bath, Chairman of the 95th annual session Golf Tournament, reports that it was a "Swell tournament—Exhibitors and supply men most generous as was the Association. I think it added a lot to the meeting in good fellowship and fun."

Following is a list of prizes, donors, and recipients:

	<i>Prize</i>	<i>Donated by:</i>	<i>Won by:</i>
Doctors :			
1st Gross	Watch	U. S. Vitamin Corp.	Dr. Francis A. Winchenbach, Bath
2nd Gross	Silver Pitcher	Surgeons' & Physicians' Supply Co.	Dr. Martyn A. Vickers, Bangor
2nd Gross	Desk Clock	Mead Johnson & Co.	Dr. Joseph Villa, South Paris
3rd Gross	Medical Case	The Zemmer Company	Dr. Edmund N. Ervin, Waterville
4th Gross	Dopp Kit	E. F. Mahady Co.	Dr. John F. Reynolds, Waterville
5th Gross	100 Estrogen	Rare Chemical Co.	Dr. Norman E. Cobb, Calais
1st Net	Weather Instrument	Lederle Laboratories & The Upjohn Co.	Dr. Stephen A. Cobb, Sanford
2nd Net	DeLuxe Poker Set	P. J. Noyes Co.	Dr. Carl E. Richards, Sanford
3rd Net	Tubex Penicillin	Wyeth, Inc.	Dr. Raymond A. Tougas, Brunswick
4th Net	Book, "Clinical Urology"	F. A. Davis Co.	Dr. Lloyd Brown, Bangor
5th Net	Billfold	Sharpe & Dohme	Dr. Herbert T. Wilbur, Southwest Harbor
6th Net	Case, Alkalol	The Alkalol Co.	Dr. Charles W. Kinghorn, Kittery
	Penicillin	Eli Lilly & Co.	Dr. Charles W. Kinghorn, Kittery
6th Net	6 Golf Balls	Maine Medical Assn.	Dr. Thomas F. Fay, Augusta
Kickers Prize	6 Golf Balls	Do-Ho Chemical Corp.	Dr. Thomas F. Fay, Augusta
	Jiffy Kit	Thomas W. Reed Co.	Dr. Thomas F. Fay, Augusta
Sportsmanship	2 Cases Hand Lotion	G. D. Searle & Co.	Dr. Raymond L. Torrey, Searsport
Ladies :			
1st Gross	Silver Bread Tray	Maine Surgical Supply Co.	Mrs. Jessica Getchell, Southeast Harbor
2nd Gross	3 Cartons Philip Morris Cigarettes	Philip Morris Co., Ltd.	Miss Louise Trainor, Bath
3rd Gross	Bathroom Scales	Geo. C. Frye Co.	Mrs. Thomas F. Fay, Augusta
1st Net	Golf Belt and Visor	Maine Medical Assn.	Mrs. Louise Hoffman, So. Lincoln, Mass.
Guests :			
1st Gross	Gal. Vacuum Jug	Parke, Davis & Co.	Dr. Everett Gaillard, White Plains, N. Y.
2nd Gross	Wood Covers	Schering Corp.	Mr. A. N. McLean, Portland
1st Net	12 Golf Balls	The Brewer Co.	Dr. D. H. R. Lester, Schenectady, N. Y.



## “A high index of suspicion”

The difficulties and pitfalls in diagnosing amebiasis are stressed frequently in medical literature.

“... despite the absence of a history of dysentery, amebiasis must be considered in the differential diagnosis of many bizarre clinical syndromes. . . . A high index of suspicion is the keynote of early diagnosis.”<sup>1</sup>

In acute or latent forms of amebiasis, Diodoquin may be employed over prolonged periods. This high-iodine-containing amebicide “is well tolerated. . . . The great advantage of this simple treatment is that in the vast majority, it destroys the cysts of *E. histolytica* and is, therefore, especially valuable in sterilizing ‘cyst-carriers.’ It can readily be taken by ambulant patients and, therefore, eliminates the necessity of hospitalization.”<sup>2</sup>

# Diodoquin<sup>®</sup>

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**SEARLE**  
RESEARCH IN THE SERVICE OF MEDICINE  
G. D. Searle & Co., Chicago 80, Illinois

1. Warshawsky, H.; Nolan, D. E., and Abramson, W.: Hepatic Complications of Amebiasis, *New England J. Med.* 235:678 (Nov. 7) 1946.

2. Manson-Bahr, P.: Some Tropical Diseases in General Practice: “A Post-War Legacy,” *Glasgow M. J.* 27:123 (May) 1946.



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## NEWS AND NOTES

### State of Maine Board of Registration of Medicine

Adam P. Leighton, M. D., 192 State Street, Portland, Maine, Secretary.

List of physicians licensed in the State of Maine, July 6, 1949.

#### *Through Examination*

James Barker, M. D., 221 Longwood Avenue, Boston, Mass.

Samuel Bluhm, M. D., 26 Fabyan Street, Dorchester, Mass.

Joseph N. Bonner, M. D., 209 Gerry Road, Chestnut Hill 67, Mass.

George Edgar Eddins, Jr., M. D., Hartford Hospital, Hartford, Conn.

Milton Robert Fortier, M. D., Veterans Adm. Center, White River Jct., Vt.

Robert Alexander Graves, M. D., Presque Isle, Maine.

Philip Frederick Hilton, M. D., 61 Pearl Street, Leominster, Mass.

Russell Auger Morissette, M. D., 300 Longwood Avenue, Boston 15, Mass.

Charles Frederick Sears, M. D., Milltown, N. B., Canada.

Harold Gordon Sears, M. D., St. Stephen, N. B.

Frederick Edward Whiskin, M. D., Maine General Hospital, Portland, Maine.

#### *Through Reciprocity*

Harvey B. Ansell, M. D., 39 Deering Street, Portland, Maine.

Stanley C. Beckerman, M. D., 276 Kingston Avenue, Brooklyn, N. Y.

Harold Arthur Braun, M. D., Hartford Hospital, Hartford, Conn.

Edward A. Cafritz, M. D., Columbia Medical Bldg., 1835 Eye St., N. W., Washington, D. C.

Charles P. Clarkin, M. D., 381 Norwood Avenue, Norwood, R. I.

Michael Crofoot, M. D., Northeast Harbor, Maine.

Leon S. Eisenman, M. D., Box 386, Okeechobee, Florida.

Ross Wentworth Green, M. D., Pondville Hospital, Walpole, Mass.

Marcel Paul Houle, M. D., 13 Bacon Street, Biddeford, Maine.

Frances Lannon Inglee, M. D., 47 Prospect Avenue, Roslindale, Mass.

Ike Jordon Mayfield, M. D., 210 S. Ashland Blvd., Chicago, Ill.

Everett Arnold Orbeton, M. D., 140 Grant St., Bangor, Maine.

Leslie M. Parent, M. D., Veterans Adm. Hospital, New Orleans, La.

Gilbert J. Rich, M. D., 515 Public Safety Building, Milwaukee 3, Wis.

Joseph Bernard Stull, M. D., Box 111, Walpole, Mass.

David A. Straus, M. D., 94 Pleasant Street, Portsmouth, N. H.

James Asa Willie, M. D., 232 Dover Road, Manhasset, L. I.

### A Good Opportunity for a General Practitioner

Pittsfield, Maine, offers a good opportunity for a general practitioner. The town has a population of approximately 4,000, with a large drawing area from surrounding villages and is located on a main highway between Waterville and Bangor. At present, there are only two elderly general prac-

tioners and an osteopathic physician. In the past the town usually had three or four practitioners. There is an open staff, 50 bed general hospital eight miles away, in Hartland. The Central Maine Institute, Kiwanis Club and the Junior Chamber of Commerce are interested in helping to locate another doctor. Any interested physician should contact Mr. Kilborn Merrill, President, Pittsfield Kiwanis Club, Pittsfield, Maine.

### Announcement of New England Conferences On Allergy and Related Subjects

A number of programs on allergy and related subjects, open without charge to all interested, is planned for the coming year. These are to be presented under the auspices of the Department of Medicine of Boston University School of Medicine; Courses for Graduates, Harvard Medical School; and the Postgraduate Division, Tufts College Medical School.

The arrangement of the first meeting is tentatively as follows:

- (1) A clinic in the afternoon to take place in one of the Boston hospitals and to consist of the presentation and discussion of cases.
- (2) A formal lecture or symposium in the evening on some aspect of medicine related to the field of allergy.

The time and place of the first meeting as well as other relevant information will be announced at a later date. It is planned to hold the first meeting late in the Fall of 1949.

FRANCIS C. LOWELL, M. D.,  
WALTER S. BURRAGE, M. D.,  
ROBERT P. MCCOMBS, M. D.

### Venereal Disease Clinics

The Department of Health and Welfare, Bureau of Health, maintains facilities for the diagnosis and treatment of venereal diseases in the following locations:

Augusta, Bangor, Bath, Belfast, Biddeford,  
Lewiston, Portland, Rockland, Rumford,  
Sanford, Waterville, Wilton and Winthrop.

Any physician wishing to refer an indigent person for diagnosis or treatment may obtain the name of the nearest clinic physician by contacting the Department of Health and Welfare, Bureau of Health, State House, Augusta, Maine. If no clinic facilities are available, physicians will be authorized to treat indigent patients in their offices. Authorization should be requested before treatment is started.

### *Twenty Years' Experience With Cancer of the Cervix—Continued from page 225*

If the lesion involves both or a part of both lips of the cervix it would fall into Group II.

If the lesion extends beyond the cervix onto the vaginal wall, under the bladder or into one broad ligament, I group it as III. All cases with malignancy spreading beyond these three groups automatically fall into Group IV.

From the grouping, patients' general health, type and grade of biopsy one forms an opinion as to prognosis. To see how far afield one can stray on this item one has but to glance at the "good" prognosis given to many who died within a year or so following treatment or glance at the list of "bad" in front of the many who survived for a few or for many years.

In making this survey I came across a few interesting items:—

1. Five sisters all had cancer. One died from cancer of the breast. One died in her early thirties from cancer of the uterus, probably cervix. She did not receive radium or X-ray therapy. The remaining three had cancer of the cervix and were treated by me. Two eventually died while the third had intestinal obstruction from constriction of the lower colon. A temporary colostomy was done by Dr. Isaac M. Weber and six months to a year later, the colostomy was removed and the normal lumen of the bowel restored. A letter from her today, August 11, 1949, stated that she was in perfect health and working every day.

2. Two sisters, both overweight, both diagnosed within half an hour of each other, group, grade and prognosis were the same. They received the same

treatment by radium and X-ray. One died within a year, the other is symptom free and perfectly well.

3. A patient treated for cancer of the cervix with good results for three years, entered the Osteopathic Hospital, was operated upon, for what I do not know, but is very happy about the whole matter and is generous in her praise to that institution for her present condition. Elsewhere in this paper is mentioned a patient who did likewise and died.

4. Two patients suffering pain in the hip several years after treatment received complete relief by cordotomy.

5. About one patient in each hundred developed general metastasis, such as seen from a malignant breast. These frequently have a mass in the left supra clavicular space.

6. One patient was symptom free in every way for twelve years following her treatment only to have a typical recurrence at the same site (cervix).

7. Malignancy of the cervix and pregnancy are incompatible. Whatever method you choose to treat it, you wish you hadn't.

In reviewing these five hundred and fifty cases I get the same feeling that I do when I wander through the cemetery where lie so many of my boyhood friends. There are too many headstones. Today the majority of these victims would not retire so early. Will science, experience, education and non-procrastination cause fewer headstones in the conflict with nature's number two killer—Cancer?



# Meet Scotland's Favourite Son



And it goes without saying that in Scotch whisky . . . that favourite son is Johnnie Walker! Just savour its glowing richness of body and flavour . . . and you'll see why.

## JOHNNIE WALKER

Born 1820, still going strong. Blended Scotch Whisky . . . Red Label . . . Black Label . . . both 86.8 proof. Canada Dry Ginger Ale, Inc., New York, N. Y., Sole Importer.



*Medical Social Service at the Maine General Hospital—  
Continued from page 240*

SOCIAL SERVICE DEPARTMENT  
MAINE GENERAL HOSPITAL

STATISTICS OF MEDICAL SOCIAL CASEWORK  
MONTH OF MARCH, 1949

Cases carried over from February .....	53
Cases opened .....	73
Total case load .....	126
a—service .....	3
b—brief service .....	123
Cases closed .....	75
Cases carried forward to April .....	51
Interviews and contacts with patient and family .....	118
Interviews and contacts with physicians .....	160
Interviews and contacts with Social Agencies ....	91
All other interviews and contacts .....	129
Total interviews and contacts .....	498
Home visits .....	14
Letters .....	123
Appliances obtained .....	6
Emergency relief .....	3
Transportation provided .....	7
Chronic care arranged .....	16
Custodial care arranged .....	3
Homes for homeless arranged .....	6
Follow-up referrals .....	58

For Sale

Doctor's office equipment, including Examination and Operating Tables, Castle Sterilizer, Continental Scales, Blood Pressure Instruments, Glass-top and Enamel Stands, Instruments, Cabinets, Roll-top Desk, Chairs, Stools, etc.

S. G. SAWYER, M. D.,  
Cornish, Maine.

WANTED

Resident Medical Doctor

Peaks Island, in beautiful Casco Bay, 3 miles from Portland, desires Resident Medical Doctor. \$720.00 per annum provided by City of Portland for Charity and School Clinic. Daily ferry service. Average year round population, 1500 to 2000. Write Chairman, Peaks Island Medical Committee, c/o Maine Medical Association, 142 High Street, Portland.



# The Journal of the Maine Medical Association

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Volume Forty

Portland, Maine, September, 1949

No. 9

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## SURGICAL TREATMENT OF VARICOSE VEINS

WILLARD H. BUNKER, M. D., Calais, Maine

It is quite apparent from the large amount of literature published on circulatory disease that many of our problems still remain unsolved especially the surgical treatment of varicose veins of the lower extremities.

Personally I have nothing original to contribute to the treatment of this condition but will simply make a few comments and present a few cases that have been most gratifying to me.

It is agreed that varicose veins are those that have become dilated, tortuous and usually fibrosed. Their valves may have become incompetent, rendering the veins entirely useless, thus throwing the entire burden of returning the blood to the heart completely on the deep veins, resulting finally in a painful condition with thrombosis and finally ulceration of the superficial tissues.

To avoid this unpleasant situation we may first try rest in the recumbent position, with a pressure bandage to support the veins, or we may prefer to carry out the injection treatment with sclerosing chemicals, but if this fails the high and low ligation may be carried out, also resecting a reasonable amount of the vein combined with the injection treatment.

If this fails to give beneficial results, as it has several times in my limited cases, there is only one alternative and that is resection of the entire long saphenous vein by first ligating and dividing it at its junction

with the femoral vein and carefully following its course down to an inch or two above the ankle.

All small communicating veins should be ligated and all bleeding controlled. Personally I use fine silk for skin suture. I have used spinal anaesthesia on all cases, usually pontocaine. The patients remain quiet in the hospital for ten days and are discharged on the twelfth day.

The following cases were partially disabled when surgery was performed and at the present time they are carrying on their duties whatever they may be with no degree of disability whatsoever.

### *Case 1:*

F. McLaughlin, 62 years old, entered the hospital complaining of considerable pain and swelling of the left leg. Very large tortuous veins. He gave a history of a series of injections eight months before with no improvement. He had a large amount of sugar in his urine with a blood sugar of 162 mg per 100 cc of blood. He also had a very large prostate with difficulty on urination, and a blood urea of 50 mg. He was placed on a diet and given insulin, his blood sugar was reduced to normal and under spinal the entire long saphenous vein was removed from its junction with the femoral vein to about three inches above the ankle.



He made a good recovery, no complications and carries on an extensive fish business at Grand Manan, New Brunswick.

#### Case 2:

Dr. R. D. H., age 56, occupation, veterinary, entered the hospital May 26, 1939, complaining of considerable pain in the right leg aggravated by walking. He had a large dilated, tortuous vein, badly thrombosed from the ankle to the groin. He had had three different series of injections and one high ligation with poor results.

On May 26, 1939, I removed the entire vein from the ankle to the groin.

He has had no complications, has worked every day and is very well pleased with the results.

#### Case 3:

Mr. H. Lishness, 56 years old, occupation, foreman of a novelty mill. He entered the Chipman Memorial Hospital on January 20, 1948, giving a history of striking his left leg on a rack November 28, 1947. This resulted in a pronounced phlebitis and thrombosis of the long saphenous vein of the left leg. This was treated by rest in bed, elevation of the leg, hot packs, penicillin, and sulfadiazine. The leg improved under this treatment but the thrombosis continued and he still had pain on walking. On January 21, 1948, without further treatment I resected the long saphenous vein from the ankle to the groin. He was discharged from the hospital on the twelfth day. He returned to work two weeks later and has lost no time since.

#### Case 4:

Mrs. N. Withan, North Anson, Maine. The patient was 33 years old. She had four living children, occupation housewife and complained of being very nervous. Systolic blood pressure of 102, kidneys

and heart normal. The left leg badly swollen, the long saphenous vein badly thrombosed and very tortuous especially below the knee. She had had the vein injected several times and a high ligation one year ago.

She entered the Chipman Memorial Hospital on June 21, 1948, and after a rather complete checkup I removed the entire long saphenous vein from the ankle to the femoral vein.

She made an uneventful recovery and has been well ever since.

#### Case 5:

Mr. C. Polk, Princeton, Maine, 60 years old, occupation farmer. He entered the Chipman Memorial Hospital on January 10, 1949, giving a history of a compound fracture of the right tibia five years ago. Since that time the veins have become more pronounced in the entire leg. Painful at times especially when walking. On examination, they were found to be thrombosed and very tortuous covering a large area just below the knee.

This patient had had the vein injected twice without satisfactory results. On January 11, 1949, the vein was removed under spinal anaesthesia. The patient was discharged on the fourteenth day, returned home and has been very comfortable since. He has resumed his duties as a farmer and is very well pleased with the results.

#### Summary:

The end results from these cases alone have convinced me that something can be done to relieve these patients. I would like to emphasize the importance of thorough aseptic preparation of the limb, the advantage of spinal anaesthesia and the necessity for gentle manipulation of the tissues, complete rest in bed for eight or ten days with the limb elevated and pressure bandage applied.

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There is much to recommend the practice of integrating tuberculosis hospital facilities with those of a general hospital. This is especially true when a general hospital possesses central services and resources which can provide for the additional patient load. Indeed, even where separate construction is practicable, it is desirable to consider locating the tuberculosis unit adjacent to the general hospital, thus permitting the use of common facilities.—Robert J. Anderson, M. D., *Pub. Health Rep.*, Nov. 5, 1948.

The real purpose of every type of attack we make on tuberculosis is the eventual eradication of the disease from this country. It is the urgent need to eliminate perpetual danger to public health that makes rehabilitation of the tuberculous so important. It is the fact that tuberculosis is perpetuated by transmission from one person to another that justifies any measures which will not only make a tuberculous person well but also keep him well.—Norvin C. Kiefer, M. D., *Nat. Tuberc. A. Tr.*, 1948.

## CYTOLOGY AND UTERINE CANCER DETECTION IN GENERAL PRACTICE\*

By J. ERNEST AYRE, M. D., AND W. BURTON AYRE, M. D.

From the Cytological Laboratories, Donner Building for Medical Research, McGill University, Montreal, Canada

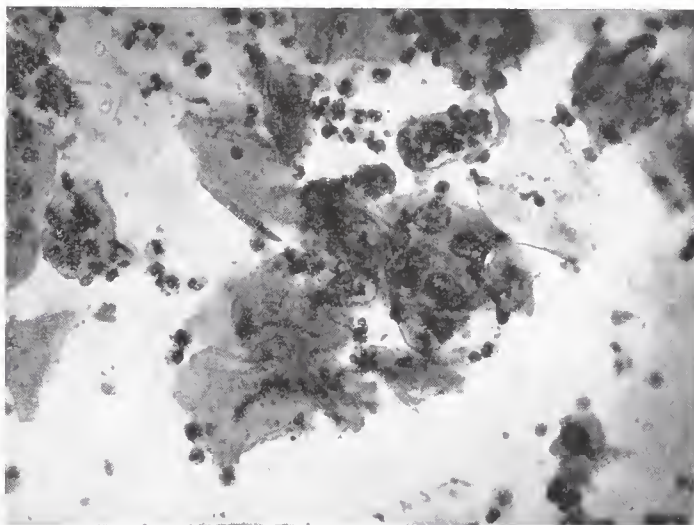
Twenty-six thousand women die annually from cancer of the uterus in America. Ninety per cent of these cancers start at a known point of origin—the squamo-columnar junction of the cervix. A method has been evolved of determining early cancer change in this area while cure is yet assured. Facilities for its application are within the reach of every medical practitioner.

This method of uterine cancer control is based upon the work of Dr. George N. Papanicolaou. In 1928, while studying cells in the vaginal secretion of women he noticed in certain instances the occurrence of bizarre cell types with large irregular hyper-chromatic nuclei.<sup>1</sup> He was subsequently able to show that these cells had been desquamated from the surface of a malignant lesion of the uterine epithelium. The possibility that the presence of such unusual cell types in smears made from vaginal secretions might provide an indicator of the presence of uterine malignancy was envisioned.

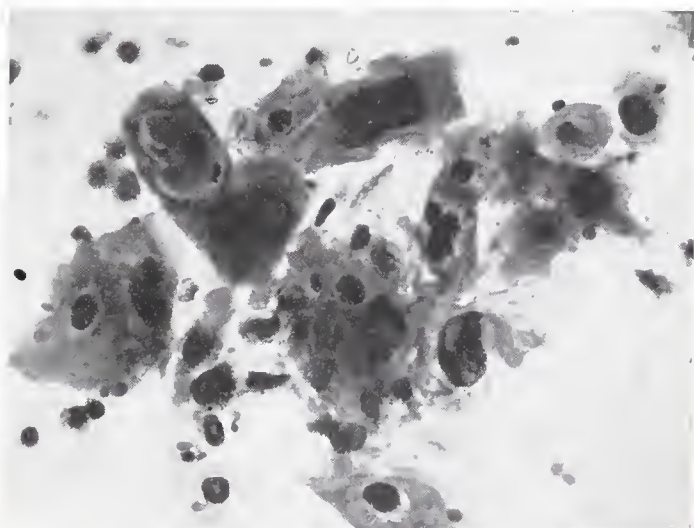
In 1928, however, Papanicolaou was unable to arouse the interest of clinical men in this possibility. Later in 1943 in collaboration with Traut<sup>2</sup> the practical application of this principle for the detection of malignant disease was proven. The results of their findings were published in a monogram entitled "The Diagnosis of Uterine Cancer by the Vaginal Smear." In the study reported, over three thousand adult women were examined. 179 were found to have carcinoma primarily in the uterus. The fact of outstanding importance in this group, however, is that in 9, the use of the vaginal smear was the only thing which brought the presence of malignancy to the attention of the clinician. It was proven, therefore, that by this method carcinoma of the cervix might be detected in an early stage before there was any evidence of a lesion which might arouse clinical suspicion. This fact was rapidly confirmed by Meigs and his group in Boston<sup>3</sup> and Ayre<sup>4</sup> in Montreal.

Papanicolaou's technique depends upon finding cells which have been desquamated from the surface of a malignant lesion into the diluting vaginal secretions. At McGill a slightly different method has been applied, one more closely allied to a biopsy, the so-called "surface-biopsy"<sup>5</sup> method. Since 90% of uterine cancers originate in the immediate area of the

squamo-columnar junction of the cervix it was felt that smears prepared from surface scrapings of this area might serve to provide more definite evidence of the very early carcinomatous lesions. Microscopic study of the cell scrapings reveals a surprisingly accurate interpretation of cancer by experienced study of the abnormal epithelial cells.



Malignant cells and normal cells in the cervical smear. Note cluster of cancer cells with large irregular hyperchromatic nuclei in the centre. Normal squamous cells, wafer shaped, with small pyknotic nuclei are scattered over the field.



Cancer cells in the cervical "surface-biopsy." Note the cluster of malignant cells with large irregular hyperchromatic nuclei.

\* This paper was read by Dr. W. Burton Ayre at the meeting of the Washington County Medical Society and St. Croix Medical Society at Queen Hotel, St. Stephen, N. B., February 21, 1949.



As Papanicolaou has pointed out, the cytology technique is not recommended as a means of ultimate diagnosis. "It should be used as a preliminary or sorting procedure and should be confirmed as a matter of routine by biopsy and tissue diagnosis."<sup>2</sup> The tissue diagnosis may, however, in most instances be accurately forecast from cytology findings. Just as pathologists have forecast subsequent behaviour of a tumour on the basis of its structural appearance in the biopsy, so may the structure of abnormal cells forecast what the biopsy will show.

Cytology studies, by uncovering new facts, are influencing our concepts of the malignant disease process as a clinical entity. It has been found that early carcinoma of the cervix is a preclinical lesion. It is not visible, and cannot be detected by the naked eyes of the clinician. It is not an ulcerated lesion; and it does not bleed. Gynecological experts have previously stressed the importance of biopsying any suspicious lesion of the cervix. *It is now becoming evident, as a result of cytology studies, that there is no adequate clinical criterion of suspicion in early uterine cervix cancer.*

To detect early uterine carcinoma by the biopsy method would necessitate a biopsy on every cervix. TeLinde<sup>6</sup> has applied this method in his clinic at Johns Hopkins. From a large series of biopsies he has, I believe, found 60 odd early carcinomas of the cervix which were clinically unsuspected. By the use of cytology techniques in a similar series 62 early unsuspected carcinomas have been detected in the Royal Victoria Hospital Clinic. It is our feeling that the routine cytology technique is much to be preferred to the routine biopsy. The taking of the material for a cytological interpretation can be done in a painless fashion in the office of the family physician. No special surgical equipment is required. It is also more accurate as it provides a sampling of cells from the entire vulnerable zone. The multiple punch biopsy method, in contrast, provides random sampling from scattered areas of the vulnerable zone and may entirely miss the tiny invisible area in which the early malignancy has already been established.

Cytology offers a method of early detection and control of cervix cancer today. (At this point a series of prepared color photomicrographs of uterine cervixes in different cases was shown.) All of these cervixes exhibit preclinical or invisible cancer as shown by cytological study of the cells at their squamo-columnar margins. According to the usual criteria for the decision to proceed to biopsy they show insufficient clinical suspicion to warrant this procedure. It is obvious that our criteria for taking a biopsy are at fault. If we wait to apply the usual standards for determining when a biopsy should be taken we will, in almost every instance, be taking tissue sections on cases of advanced malignant disease. The unusual morphological characteristics of the individual cell as seen in cytology smears provides the only accurate

indicator for determining when a biopsy should be taken.

We should like to emphasize at this point, however, that although the criteria for malignancy as determined by cytology depends upon features of the individual cell, the presence of malignancy is not diagnosed upon the presence of an individual atypical cell. With the "surface-biopsy" technique the presence of an early carcinoma of the cervix is reflected by collections of abnormal cells in the smear which are identified by individual cell features. It is, however, the presence of these *collections* of cells with atypical individual cell features which indicates the presence of carcinoma rather than the presence of an individual atypical cell. The presence of atypical cells in clusters is considered highly pathognomonic since it is evident when a smear exhibits such a cluster surrounded by cells from apparently normal epithelium that the collection of atypical cells had its probable origin in a strictly circumscribed lesion of the epithelium.

The ultimate value of cytology will probably depend upon the number of cases of malignancy discovered by its application which would otherwise have been missed. How many unsuspected cancers would we find if 1,000 healthy women had cytology tests? While most of the statistics on this point do not deal with adequate groups of healthy women some selective groups are of contributory value. In five-hundred odd consecutive cases having routine cytology scrapings at the Royal Victoria Hospital Gynecological Clinic, it is significant that 11 cancers were picked up by cytology which were unsuspected and would not have been biopsied otherwise. In another group of 1,209 received by mail for staining and interpretation, 63 cancers were found. While these were not all preclinical and most were cases arousing suspicion in the minds of their physicians, about 20% were reported as surprise finds. Others have had similar results. Dr. William F. Mengert of Dallas, Texas, in a discussion of the status of non-invasive carcinoma of the cervix in the *American Journal of Obstetrics & Gynecology*, January, 1949, page 36, states, "Since last September, we have done vaginal smears according to the method of Ayre on some 800 women and have found 7 with intra-epithelial carcinoma. Not one of these 7 women had either sign or symptom of carcinoma. They were simply routine admissions to our out-patient clinic."

The following are two representative case reports:

*Case No. 1.* Age 28, para 2. Complaint: leucorrhea. Routine "surface-biopsy" scraping positive for cancer cells. Cervical inspection revealed a benign-appearing erosion, but a hidden cancer was developing on the rim of this erosion. The first biopsy was reported as suspicious with secondary hyperplasia. A total hysterectomy was performed. Over 100 biopsy sections from the squamo-columnar junction circum-

ference were studied before the zone of squamous carcinoma was found.

*Case No. 2.* One of the eleven cases detected by routine screening in the outdoor clinic was a woman age 49, complaining of pruritus vulvae. She had no bleeding for four months previously. She had had a radical mastectomy on the left side for carcinoma of the breast four years previously with no evidence of recurrence at this time. Clinically, the cervix showed a large erosion with cervicitis. A routine "surface-biopsy" cytology test was taken and the patient was given palliative douches and sent home. Cytology report: positive for cancer cells of the squamous type. The patient was brought into hospital and a biopsy was taken. The report was negative for cancer. Repeated cervical scrapings continued to show many cancer cells. A total hysterectomy was performed, following which multiple sections were taken through the squamo-columnar junction of the cervix. Surgical extirpation of this growth while in a preclinical stage and while not yet in clinical stage I, should ensure a good prognosis.

These two cases illustrate the unique applications of the cytological method and its superiority as a method for the detection of the very early carcinomatous lesions. As pointed out, multiple sections were required from the biopsy material which was taken in each instance. Without the evidence presented by the cervical smear, there would have been no indication for careful serial section studies. Any random section cut from the biopsy specimen might readily have missed these lesions. The pathologist's report would have been as usual, "no evidence of malignant activity," and a clinician in imparting this information to the patient would have been responsible for lulling the patient into a sense of false security by his reassurances. The cytology method stands, therefore, in an unparalleled position as regards the detection of early uterine cancer.

In order to secure pathological confirmation by histology sections in each case, considerable care is some-

times required. To obtain the true biopsy evidence it has therefore been recommended<sup>7</sup> that the ring of tissue which includes the entire squamo-columnar junctional area be obtained for multiple sectioning. A special cone knife has been devised for this purpose. The knife removes a cone of tissue similar to that removed by electro conization but the tissue is not cooked and the cells in the squamo-columnar margin are not destroyed. Multiple or serial sections are then made on tissue secured in this manner and the diagnosis of small neoplasms which might be missed by a single biopsy section is more assured.

Next to a cure for cancer, a method of controlling cancer is needed. Applied by the medical practitioner cancer control in this one common type of cancer is today a definite possibility. The routine application of this method insures the detection of uterine cancer while still in a curable stage. The glycerine mailing technique devised by Ayre and Dakin<sup>8</sup> places the specialized cytological laboratory within the reach of every physician and makes the detection of uterine cancer in women as simple and as efficient as the detection of disease by the Wasserman test.

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Ignored tuberculosis progresses. An organized regimen, active treatment, awareness of the possibilities and coöperation are necessary to cure or check the disease. Sarcoidosis may be entirely ignored, and with few exceptions the patient does just as well, or better, than with medical intervention. There is an environmental and family factor in tuberculosis. Great stress is laid on finding the infection source — the contact. — Henry E. Michelson, M. D., *J. A. M. A.*, April 17, 1948.

There are two aspects to the educational problem (in tuberculosis). First, the getting of knowledge, which is not, after all, a very difficult thing to do. . . . We perhaps are sometimes embarrassed by the knowledge we have. The knowledge which we have of tuberculosis is really enormous. . . . The second aspect is the difficult problem: making this knowledge effective. . . . There are three to educate, the public, the profession, and the patient. — William Osler, M. D., *Nat. Tuberc. A. Tr.*, 1905.



## ESTABLISHMENT OF CYTOLOGICAL DIAGNOSIS IN LABORATORY OF SMALL HOSPITAL

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In December, 1948, the senior writer through the courtesy of a scholarship given by the N. B. Division of the Canadian Cancer Society was able to study for two weeks under Dr. J. Ernest Ayre at the Donner Cytological Laboratory of McGill University, Montreal. On returning to St. Stephen, after consulting with the directors of the hospital and medical staff it was decided to establish a Cytological Service at the Chipman Memorial Hospital for examination and screening of cervical smears.

The method used to obtain the smears was that devised by Ayre and Dakin as described in *Am. J. Obst. & Gynec.* (53:609:617, 1947). By this method a wooden spatula, which fits into the cervical canal, is used to obtain a scraping from the squamo columnar junction and the material thus obtained is smeared on two etched glass slides which are immediately immersed in a mixture of equal parts of ether and grain alcohol (this can be any strength grain alcohol which does not give a precipitate with Xylol). At the request of any doctor a supply of applicators and slides and staining jar with top is provided. The smears remain in alcohol until the doctor leaves for the hospital, when they are carried in a cardboard slide case accompanied by a small card with some particulars about the patient. If the doctor finds this method inconvenient he can put a drop of glycerine on each slide and cover with another slide and send these to the laboratory. To remove the glycerine the slides must be immersed for five minutes in absolute alcohol and then put in the ether and alcohol mixture. The slides without the glycerine are immediately put in alcohol and ether and we have found that the short time elapsing between the doctor's office and the hospital laboratory does not affect the slides in any way.

The staining is done by Ayre's modification of Papanicolaou's technique. This is as follows:

(For slides covered with glycerine 5 minutes in absolute alcohol):

1. Wash in 70%, then 50% alcohol.
2. Rinse well in two changes of distilled water.
3. Stain in Harris Hematoxylin for 5 minutes—older stain requires more time. Change stain regularly every two weeks.
4. Rinse thoroughly in 0.5% aqueous solution Hc1 then wash with tap water.
5. Rinse in lithium carbonate (saturated solution) till blue.
6. Rinse in running tap water (cold) for 15 min-

utes for routine staining. If time is a factor, 5 to 10 minutes is long enough.

7. Then 50%, 70% and 80% alcohols, one rinse each.
8. Rinse once in each of two changes of 95% alcohol.
9. Stain in Pap. OG 6 for 3 minutes or longer, depending on age of stain.
10. Rinse 3 times in each of two 95% alcohol.
11. Stain in Pap. EA 50 for 4 minutes.
12. Rinse 3 times in each of three 95% alcohols.
13. Rinse twice in absolute alcohol.
14. Then two changes of Xylol.
15. Mount in Canada Salsam, Clorite or Permout. Permout preferable.

The most satisfactory results are obtained when using the 5, 3, 4, timing, i. e., Hematoxylin 5 minutes.

OG 6	3 minutes
EA 50	4 minutes

The stains referred to can be purchased from the Ortho Chemical Products but the Harris Hematoxylin can be made in any laboratory. The slides as received are usually held until the following morning when they are stained and examined that afternoon. A form similar to that used by Dr. Ayre is used for reporting the diagnosis.

The work was greatly stimulated by a lecture with accompanying sound films given by Dr. W. B. Ayre to the St. Croix Medical Society in St. Stephen on January 24, 1949.

Since the service was organized on January 8, 1949, we have to date examined 100 smears of the cervix with the following results:

Negative 53%	Unsatisfactory 1%
Group I 27%	Sent to Dr. Ayre for consultation 17%
Group II 13%	
Group III 6%	

Arrangements had been made with Dr. J. E. Ayre to consult on any smears that were doubtful. It was felt that this would amount to about 20% and that the remaining 80% would be screened by us here at our laboratory and the figures bear out that assumption. During the month of March both writers spent a week at Dr. Ayre's laboratory checking up on various details of the work and this extra time spent was of great value.

INTERPRETATION OF CYTOLOGY

No cancer cells found	Cervicitis .....
	Erosion cells .....
	Inflammatory hyperplasia .....
Group I   Suspicious cells.   Atypical morphology. Appears benign. Advise.	A.   Recheck in ..... months.
	B.   Biopsy.
Group II   Atypical cells of cancer—potential type. (Precancer Cell-complex)	A.   Indicative of hyperactive growth. Follow carefully. Recheck in ..... months.
	B.   Indicative of hyperactive and atypical growth. Recheck in ..... months.
Group III   Positive for cells of cancer type. (A, B or C indicates degree of Cytologic certainty. It does not refer to the stage of the cancer.)	A.   Suspicious cells with malignant morphology but inclusive without biopsy.
	B.   Conclusive morphology of malignancy. May confirm by biopsy.
	C.   Absolute evidence of malignancy.

Cytologists and many gynaecologists believe that every woman over thirty should have a cervical smear done once a year ; and that in this way an appreciable number of very early cervical and uterine cancers would be discovered when they are in the curable stage. To even begin to accomplish this program a great number of screening laboratories will have to be set up and also a large number of cytologists will have to be trained.

As yet we have not attempted to obtain a specimen from stomach, bronchi or lung but we have done two peritoneal fluids with unsatisfactory results.

Of the six Groups III cases, diagnosed as carcinoma by Cytology, three were confirmed by biopsy, one was negative on biopsy and two did not return for further study. Of the three carcinoma cases one was far advanced clinically ; cytology and biopsy only confirmed the diagnosis. The other two cases were early "carcinoma in situ." One had radium treatment followed by complete hysterectomy three months later when no evidence of carcinoma was found in the uterus. The other had cervical cauterization following the biopsy and a complete hysterectomy was done ten days later and again no carcinoma was found in the healed cervix.

It is felt that cytology was the means of providing an excellent prognosis in these two cases and that at least two others could have had a very early carcinoma removed with good chances of complete cures.

This would give a "cytology salvage" rate of 4% which is very much worth while. Of course this series was of cases that were nearly all pathological and routine cytology in the otherwise healthy woman would probably give a very low number of positive cases.

One very interesting case was a patient aged 65 who had had the menopause 14 years before and whose only symptom was uterine bleeding. Cytology showed no malignant cells but a large number of cornified epithelial cells when none should have been seen. She also had a questionable mass in her pelvis. A diagnosis of ovarian tumor was made and operation disclosed a carcinoma of the ovary confirmed by biopsy. Another similar case without a pelvic mass is coming in for a recheck. We believe that in such cases an exploratory laparotomy is indicated.

We feel that a cytological addition to the small hospital laboratory can be easily made and that any one who has had experience in examining tissues can learn to screen cytological slides.

May, 1949, St. Stephen, New Brunswick.

The body cannot undo the damage wrought by years of tuberculosis infection in a few days or even in a few weeks. Many months are required even to

"arrest" the disease. — H. Corwin Hinshaw, M. D., *Nat. Tuberc. A. Tr.*, 1948.



## THE TREATMENT OF BRONCHIECTASIS

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Chronic pulmonary infection has long presented many difficulties to physicians both in diagnosis and treatment. As diagnostic ability has become more acute and techniques have become more accurate, several disease entities have been separated from the main group. Among these bronchiectasis has been known for many years. Only during the last few years, however, has significant progress been made in its treatment. The condition was first described from pathological material by Laennec in 1819. It was demonstrated clearly in the living in 1922 by Sicard and Forestier who first introduced iodized oil into the bronchial tree. Refinements of their techniques are used today.

Treatment of the disease was long purely symptomatic. Uncertainties as to the diagnosis and lack of understanding of the pathogenesis and pathologic physiology rendered efforts at prevention and cure ineffectual. When the nature of the disease was better understood, the perils of operating in the open chest made removal of diseased tissue very hazardous. The recent advances in thoracic surgery and the still more recent addition of the sulfonamides and antibiotics to our therapeutic armamentarium have changed tremendously the outlook for sufferers from this disease. I think it is worth while, therefore, to review at this time the present status of the treatment of bronchiectasis from the medical, surgical, and particularly the prophylactic point of view. For in spite of the great advances in operative treatment that have been made, prevention is clearly the ideal to be sought and there are still about fifty per cent of these sufferers whose disease is not amenable to surgery.

Let me now describe to you the symptoms of the disease and point out to you the unhappy plight of sufferers from this condition. In a typical case the symptoms begin in childhood. The usual story is that the child has had a severe bout of one of the childhood diseases, most frequently whooping cough or measles. The disease was complicated by bronchopneumonia. Recovery was never complete and the child was left with a chronic cough. This waxed and waned with the seasons, always being worse in the cold, damp months. The cough was characteristically productive of purulent sputum, which was sometimes foul and occasionally blood streaked. The child was subject to many colds and had repeated attacks of bronchopneumonia, almost always involving the same portion of the lung. As a result of this train of events the child's development was retarded. He fatigued easily

and was unable to keep up with his fellows. His education suffered from frequent illnesses. His cough and sputum made him an object of ridicule. Small wonder that he avoided his fellows and became intropective. As the individual grew older the symptoms became more marked. He was unable to hold a job, normal social intercourse was avoided, and marriage seldom entered. The increasing strains of adult life became too much for his limited reserve. His health broke in the thirties, and he died of one of the complications of bronchiectasis soon thereafter.

Many develop a definite psychosis. Suicides are not unknown. Because of the persistent cough and sputum, and particularly when hemoptysis occurs, these individuals are branded as tuberculous by laymen, and many instances are on record of patients who have spent years in a sanatorium in the mistaken impression that they have tuberculosis. Churchill<sup>1</sup> has vividly described the plight of these unhappy individuals.

Not only is life a miserable one, but the prognosis in untreated cases is poor. Perry and King<sup>2</sup> gained a distinct clinical impression that individuals who contracted the disease in childhood died before they arrived at the age of forty. Twenty-six per cent of their cases died during the twelve-year observation period. Roles and Todd<sup>3</sup> quote a forty-seven per cent mortality in a six-year observation period. Death resulted from the complications of the disease, among which are pneumonitis, lung abscess, cor pulmonale, brain abscess, empyema, and amyloid disease.

Severity of symptoms, amount of sputum production, and degree of incapacitation, of course, vary extensively in different individuals and in one individual at different times. But obviously any disease which causes as much misery and as much economic loss as this one deserves our best efforts diagnostically and therapeutically.

To treat the disease intelligently it is first necessary that we understand, in so far as possible, the pathological changes and underlying causes which are present. Many theories have been suggested to explain its occurrence, but as yet there is no general agreement.

Generally speaking the disease can be classified into three types:

A. Bronchiectasis in which there is an open bronchus.

B. Secondary bronchiectasis in which there is bronchial obstruction due to an intrabronchial foreign body or tumor, or extrabronchial pressure from mediastinal lymph nodes, etc.

\* Presented at the June, 1949, meeting of the Washington County Medical Society.

C. Congenital cystic disease of the lung. This is a relatively rare condition.

Bronchiectasis is also classified as to the type of dilatation of the bronchus:

A. Cylindrical bronchiectasis if the enlargement is general and uniform.

B. Fusiform if the enlargement is general and many fusiform dilatations are present.

C. Saccular if the enlargement is in localized pockets. This latter is less frequent but holds a graver prognosis.

The fundamental abnormality in the bronchial tree is dilatation of the smaller bronchi. Dilatation is commonly associated with infection. Infection causes the formation of granulation tissue. Infection destroys the mucosal lining of the bronchi and the musculo-elastic tissue in the bronchial walls. Healing is by scar formation. The walls lose their contractility and become dilated. The normal ciliated bronchial mucosa is replaced by a non-ciliated variety. Granulation tissue blocks off small bronchioles, resulting in emphysema and later in abscess formation. The infection involves the surrounding lung parenchyma. Whole segments of lung may be reduced to airless masses of scar tissue containing pools of pus.

We can relate the symptoms to the pathological process as described. The dilatation of the bronchial walls, their loss of contractility, and the loss of the beating of the ciliated epithelium result in the failure of the involved bronchi to empty themselves. Furthermore, the lack of air in the fibrosed and collapsed air sacs distal to the diseased bronchi provides no air for the expulsive effort of coughing. Hence stagnation of the bronchial secretions results. Infection quickly follows. The bronchi fill with pus and on over flowing or when the patient changes position secretions pour out. Bleeding comes from the friable granulation tissue in the bronchial walls or dilated vessels which appear as the destruction of the wall progresses.

The picture is somewhat different in dry bronchiectasis. This condition is usually found in upper lobe bronchiectasis. Here because bronchial drainage is good on the basis of the upward direction of the bronchi, pooling of secretions and infection is minimal. Sputum production is scant and is characteristically bloody. There is far less involvement of the surrounding lung parenchyma.

The distribution of the disease in the lungs is on a definite segmental basis. Churchill and Belsey<sup>4</sup> early, and others since, have stressed the segmental arrangement of pulmonary tissue. The lungs are divided into bronchopulmonary segments in lobes and portions of lobes. Each segment is a complete unit. It has its own bronchial and vascular components. The disease tends to limit itself to these segments. At the time the disease is usually discovered it involves whole units, whole lobes, or segments of lobes. As the disease is

followed in an individual, there is little extension from one lobe or segment to another. This holds true unless the individual undergoes another causal episode like an attack of bronchopneumonia. This may cause extension to other bronchi.

The etiology of this condition has been explained on several bases. The most widely accepted theories are based on bronchial obstruction, atelectasis, and infection. As described above bronchial obstruction and infection damage the musculo-elastic tissue in the bronchial wall and weaken it. The possible forces which might cause bronchial dilatation were extensively investigated by Andrus.<sup>5</sup> He concluded that atelectasis is the only mechanism which can supply the forces necessary to cause this condition. This theory has been well illustrated by Fleischner.<sup>6</sup> Recently Mallory<sup>7</sup> has written a convincing paper in its favor.

Andrus showed that in a normally expanded lung the intra pleural pressure varies from -4 to -6 mm. of mercury. When atelectasis of a portion of the lung occurs there is a marked decrease in the volume of lung tissue. As the walls of the thoracic cavity are stiff there is a tremendous increase in the negative pressure. Part of this negative pressure is compensated for by elevation of the diaphragm, part by over expansion of the remaining lung tissue, and part by shift of the mediastinal structures toward the side of the disease. Compensation is not complete and there remains an increase of negative pressure to as high as -40 or -60 mm. This pressure is transmitted through the inelastic collapsed lung tissue to the elastic bronchial walls. Dilatation of the walls results. Dilatation at this point is not permanent, but if it persists for any considerable length of time and infection occurs, damage to the bronchial walls results and the dilatation becomes irreversible. Then all the changes which have been described take place. These causes point the way toward prevention of the disease. They stress the importance of preventing atelectasis and obstruction when possible and relieving them when they occur.

The relationship between sinusitis and bronchiectasis is frequently brought out. Some authors maintain that sinus disease causes the bronchiectasis. It is true that the two conditions are frequently found together, but sinus disease occurs without bronchiectasis and recurrence of the bronchiectasis after resection does not take place in the presence of persistent sinus disease. It seems more likely, therefore, that the lowered resistance caused by the bronchiectasis may favor the development of the sinusitis.

Congenital bronchiectasis is a rather uncertain group. It is now felt that many of the cases once thought to be congenital in nature actually developed at birth due to incomplete expansion of the lungs. It is still described and is attributed to several causes:

A. Lack of development in the embryonic stage, the alveoloagenetic bronchiectasis of Castex.<sup>8</sup>



B. Due to virus diseases in the first trimester of pregnancy as suggested by Ericson, et. al.<sup>9</sup>

C. Lack of vitamin D. Warkang, Anderson.<sup>10</sup>

D. In association with sinusitis and dextrocardia. This condition is known as Kartagena's triad.

We have gained some idea as to the present-day theories of the cause of this disease. Let us now examine the methods of treatment. I shall divide the treatment into three phases: prophylactic or preventive, medical, and surgical. Progress has been made in all. We have seen that atelectasis plays a major role in causing the condition. From the time of birth on we are subject to this phenomenon. Anspach,<sup>11</sup> a roentgenologist, in the thirties pointed out the importance, particularly in infants, of a triangular area of density in the lower lung fields. This may be completely obscured on the left by the heart shadow if the exposure is not perfect, or if lateral views are not taken. These were once thought due to pneumonia or loculated fluid. It is now realized that they are frequently due to atelectasis and appropriate therapy is indicated. Atelectasis follows operative procedures far more often than is commonly appreciated. If the lungs are carefully examined during the first few post operative days, suppression of breath sounds, rales, and tracheal shift will be detected in a high percentage of the cases. "Ether pneumonia" and post operative pneumonia, when they occur, practically always develop as a complication of atelectasis and may go on to bronchiectasis. Whether the condition results from actual aspiration of material or collection of secretions due to feeble cough makes little difference. Clearing of the airways is essential. Fractured ribs often lead to atelectasis. Intrabronchial foreign bodies are, of course, well known offenders. All these factors are potential producers of bronchiectasis. Hence they should be watched for and eliminated as soon as possible. The normal mechanism is violent coughing. This should be encouraged by slapping the back. Post operative patients should be encouraged to move. If conservative measures fail a catheter should be inserted into the trachea with a minimum of anesthesia and suction applied. This produces a violent cough as well as effective suction. Where pain causes shallow breathing and weak cough, novocaine block of the effected intercostal nerves will sometimes produce dramatic results. If all else fails, bronchoscopic aspiration should be used. For intra-tracheal foreign bodies there is little question as to the necessity of this procedure. It is an important, and all too frequently neglected, form of treatment in less dramatic forms of bronchial obstruction.

In atypical pneumonia, which is so frequently encountered at the present time, there is a large element of atelectasis. In this condition it should be watched for and not allowed to persist. Cases of "unresolved" pneumonia are often explainable on this basis and if allowed to persist will result in permanent damage

to the involved bronchi. In connection with atypical pneumonia it should be mentioned that reversible or pseudo bronchiectasis can occur. Cases have been reported by Fleischner,<sup>6</sup> and also by Blades and Dugan,<sup>12</sup> in which a bronchogram at the height of the disease showed definite dilatation. After convalescence, the dilatation completely disappeared. Surgical treatment of such a case should be withheld until there is evidence that the dilatation is permanent.

It thus becomes apparent that the prevention of the disease rests with doctors working in many fields of medicine. The man doing general work may see it in all branches of his practice. As urged by Chattas,<sup>13</sup> the pediatrician should be sure that expansion of the lungs is complete in the newborn baby. He should ascertain that there is no residual collapse after the childhood diseases in which there has been pneumonic involvement. The surgeon must watch for post operative complications and the internist must be alert to the sequellae of atypical pneumonia, to mention a few. In all these conditions the importance of taking chest X-rays cannot be overemphasized.

Medical treatment was long the only method at our disposal. The fundamental limitation is that once the disease has developed, no method short of actual surgical removal has been found for the elimination of the bronchial damage. However, in a very considerable percentage of the patients the lesions are not resectable and operation is not deemed feasible. In these, much relief of symptoms can be achieved. Also, in preparation for surgery medical methods have an important place.

A healthful regimen is essential. If the patient can be removed to a warm dry climate where upper respiratory infections are rare, it is of value. Postural drainage if properly performed can do much. Ideally constant postural drainage is to be desired. This can be approached if the patient is kept in bed. In ambulatory patients or those with jobs, much improvement can be obtained with drainage performed every two hours. The patient should lie over a table or bed with the thorax perpendicular to the floor. Two or three deep breaths should be taken to loosen the secretions and then he should cough hard until no more secretion is raised. Particularly in the early morning when the secretions have collected over night, large quantities of sputum running into the hundreds of cc. may be raised. Certain patients find that their bronchi drain more effectively in other positions, as lying on the side, back, or sitting up. If no table is available, satisfactory drainage can be achieved by bending at the waist and putting the head between the knees.

The introduction of the sulfonamides offered hope of a more effective treatment, and the drugs do help some in causing remissions. Administration of two grams of sulfadiazene daily may be of value in reducing the severity of the symptoms over a long period of time. More effective in acute relapses are peni-

cillin and streptomycin, depending on the organisms present. These have been given parenterally and in aerosol sprays. The latter are the more effective unless there be systemic involvement. Sputum is more easily raised. Fœtor is reduced. Recently there have been reports of the intra-tracheal instillation of penicillin solutions. Siltzbach<sup>14</sup> reports drops in daily sputum outputs from 250 cc. to 40 cc. or less with elimination of odor and marked general improvement after daily injection of 100,000 units in 20 cc. of saline. The stigma of the disease was removed. These can be considered only remissions, but they have lasted up to twenty-one months in one patient even though the patient has had several upper respiratory infections. This may well be a real advance in the medical treatment of the disease.

Bronchoscopic drainage has many advocates in the treatment of bronchiectasis. It unquestionably has value in helping to clean out the bronchial tree and relieving the severe attacks. It is not, however, a curative method. Riggins<sup>15</sup> reports a case in which a patient underwent over 200 bronchoscopies for treatment of the symptoms and finally died of his disease. He had a resectable lesion but apparently derived enough pleasure from cocaine used in preparing for the bronchoscopy so that he refused operation.

Surgical treatment of bronchiectasis has come of age within the last fifteen years. Previous to that the mortality was prohibitive. It is now definitely the treatment of choice. At the present time the majority of reports give a mortality of under five per cent, and Kay, Mead, and Hughes<sup>16</sup> had only one death in 220 consecutive lobectomies for a mortality of 0.4%. This remarkable development has been made possible not only by the improvement in surgical technique, but also by the improvement in anesthesia. Resection is now done by a careful and meticulous isolation of each of each of the hilar structures, arteries, veins, and bronchi. These are individually ligated. The bronchial stump is handled with a minimum of trauma. No crushed tissue is allowed to remain. The whole hilar stump is then covered with mediastinal pleura. This change from the former mass ligation technique has reduced the number of complicating fistulas and empyemas considerably. The older technique occasionally becomes necessary in a badly scarred hilus but is now seldom used.

The use of intra-tracheal positive pressure has done away with the perils of opening the chest cavity. This, probably more than any one factor, has made the improvement in results possible. Operations of five and six hours can now be performed with little embarrassment to the patient. The more extensive use of blood transfusions has also been significant. These developments now permit, in favorable cases, the removal of all the diseased lung tissue, and complete cure of the disease.

Before attempting to remove diseased lung tissue, therefore, it is absolutely essential that the disease be carefully localized. The diagnosis of bronchiectasis, if the disease is kept in mind, is not difficult. The history and physical findings early suggest the correct diagnosis. Localization is the important step for the correct treatment. It is not enough to place the disease in a certain lobe; it must be in a definite segment of a lobe or lobes. It must also be established that there is no disease in other lung segments. For it not infrequently happens that with widespread disease, resection of all the lobes which are involved would leave the patient with insufficient pulmonary tissue, but resection of only those segments of the lobes which are diseased is quite feasible. Localization is done by X-rays after introducing lipiodol into the bronchial tree and filling all the branches of the bronchi. A catheter directed into the main bronchus of the side selected is a very satisfactory method. By positioning the patient the oil can be made to run into the desired branches in a high percentage of the cases.

Selection of cases for surgery depends on the amount of disease present, the general condition, amount of emphysema, etc. In questionable cases bronchspirometric measurement of the lung function should be done. For it is tragic to do a successful resection and have left a patient who is a respiratory cripple from lack of lung tissue. It is now possible as shown early by Churchill and Belsey<sup>4</sup> and later by Overholt and others,<sup>17, 18</sup> to resect one lobe, one lobe and a segment of another, as for instance the left lower lobe and lingula portion of the left upper lobe, two lobes as the right lower and right middle, or all the lung tissue on one side. In cases of bilateral bronchiectasis where conservation of lung is more important, small segments may be resected from both lower lobes or a lower lobe on one side and the middle lobe or lingula segment of the upper lobe on the other side. Of course with resection of large amounts of pulmonary tissue and bilateral resections, the mortality is somewhat higher.

It may well be asked what happens to the empty space left by the removal of a significant amount of lung tissue and what is the function of those lungs. Compensation is remarkably good. Expansion of the remaining lung tissue does most of it. Particularly in children, the remaining lung tissue will hypertrophy and almost completely fill that side of the thoracic cavity. There will be very little elevation of the diaphragm and mediastinal shift. These latter factors are more apparent in older patients. Function also will be restored. Kay, Meade, and Hughes<sup>16</sup> have shown by bronchspirometric studies that the oxygen consumption and ventilation on the operated side returns to close to normal. This is particularly true when the post operative course is not marred by complications such as persistent atelectasis or empyema.

*Continued on page 263*



A STATISTICAL ANALYSIS OF PRIVATE PRACTICE IN EASTPORT, MAINE

RICHARD S. BUKER, M. D., DR. P. H.  
Assisted by ETHEL HUNT and JULIA ADAMAITIS

I. Descriptive Introduction:

A population of some 8,000 people are served including a small city, four small villages and two islands of 1,000 population each. Many of the people are in the habit of traveling to Calais or St. Stephens 30 miles distance where better hospitals are available. There are three M. D.'s and one osteopath and one 20 bed hospital.

II. Summary Statements:

- 1. 3,059 different people were seen during the 19 months immediately preceding this analysis. Many of the people were seen for more than one ailment. Many were seen several times for the same ailment.
- 2. Age group distribution of the above 3,059 cases:

- 1-9 yrs.

10-19

20-29

30-39

40-49

50-59

60-69

70 and over
- 18.2%

14.6%

15.5%

12.3%

13.2%

10.1%

9%

7.1%
- 3. Analysis of several years showed that about 40% of cases of one year are seen again the following year.
  - 4. Financial analysis revealed 529 (17 1/3%) cases of the 3,052 had outstanding debts. Many of these had paid something giving a collection figure of well over 85%.
  - 5. Cases seen in the seven months, October, 1948, thru April, 1949, were analyzed in detail as to total number of visits, distribution as to age group in the major diseases encountered with the percentages of each disease group.
- The following table summarizes these facts.

DISEASES BY AGE GROUP  
CASES SEEN FROM OCTOBER, 1948 THROUGH APRIL, 1949

Disease Group	Percent of Total	Age Groups							
		1-10	10-19	20-29	30-39	40-49	50-59	60-69	70 plus
1. Respiratory Infections	21.8%	41.1%	11.5%	10 %	12 %	7.5%	7.5%	6.8%	3.6%
2. Hypertension	8.6%	0	0	0	2.7%	4.6%	25.6%	35.8%	31.3%
3. Gastro-Intest. Complaints	8.1%	16.5%	17.4%	14.5%	9.7%	12.6%	12.6%	6.7%	9.7%
4. Wounds or Sores	7.1%	14.4%	31.1%	21.1%	13.3%	6.3%	4.4%	3.3%	5.5%
5. Physical Exams. Immunizations	6.2%	30.8%	33.3%	18 %	9 %	5.1%	1.3%	2.6%	0
6. Anemias	5.2%	13.4%	12.1%	12.1%	12.1%	6.1%	20 %	10.6%	13.4%
7. Skin	4.8%	18 %	14.8%	16.5%	18 %	16.5%	5 %	8.2%	3 %
8. Orthopedic	4.4%	3.6%	10.6%	20 %	18 %	25 %	7.1%	7.1%	8.9%
9. Ears and Eyes	4.3%	25.4%	12.6%	18.1%	12.6%	10.8%	5.4%	7.1%	7.1%
10. Glandular	3.6%	0	8.3%	6.2%	25 %	33.3%	18.7%	6.2%	2.1%
11. Obstetrical	3.3%	0	31 %	54.7%	14.3%	0	0	0	0
12. Heart	3.2%	5 %	0	2.4%	2.4%	2.4%	24.4%	26.8%	36.8%
13. Surgical app. Hernia—T. A.	3 %	23.6%	29.7%	10.5%	18.4%	8 %	0	2.6%	8 %
14. Miscellaneous	3 %	8.1%	13.5%	21.7%	21.7%	8.1%	8.1%	10.8%	8.1%
15. Gen. Urinary	2.6%	6.1%	9.1%	33.3%	3 %	15.1%	6.1%	6.1%	21.2%
16. Fatigue	2.4%	6.4%	25.5%	3.3%	16.1%	35.5%	9.7%	3.3%	0
17. Gall Bladder	2 %	0	0	0	0	36 %	24 %	24 %	16 %
18. Neurological	1.8%	0	0	4.3%	8.7%	26 %	30.3%	12.9%	17.4%
19. Gynecological	1.7%	0	13.6%	40.9%	22.7%	13.6%	9 %	0	0
20. Diabetes	1 %	0	0	0	0	15 %	15.3%	53.8%	15.3%
21. Varicosities	0.8%	0	0	9.1%	9.1%	9.1%	27.2%	36.3%	9.1%
22. Venereal Disease	0.5%	0	0	43 %	0	43 %	0	14 %	0

1,926 cases were seen and 7,206 visits made.

This averages 227 cases per month or 10 new cases daily. 1,000 visits per month and using 26

days a month as the usual days seeing patients, 40 visits a day were made.

Further analysis of the above table shows that 30%

of patients seen were under 20 years of age showing the need and value of a good pediatrical training. On the other hand considering the total visits, Geriatrics (all over 50) is an ever increasing speciality.

Reviewing the Disease Group analysis over fifty percent of the cases seen fall under five disease groups; that also includes the group of hypertensive

conditions which perhaps is the most important single disease group because the patient sees the doctor so often and so long.

It is interesting to note that Venereal Diseases come at the very bottom of the list. This has become particularly true since the advent of the present State method of combating these diseases.

*The Treatment of Bronchiectasis—Continued from page 261*

These complications are now fortunately rare. Sometimes the function on the operated side is greater after removal of the diseased lung tissue than before. This is explained on the basis that secretions from the diseased lobe blocked the healthy tissue. After removal of the disease the healthy tissue can function better.

Patients who have had a successful resection are dramatically improved. In Churchill's series reported by Perry and King,<sup>2</sup> there were 67% in whom the result was excellent and that figure is being improved. With the disappearance of the cough and sputum, the patient's whole outlook, physically and mentally, changes and they become normal productive citizens. There is no question at the present time that in those patients who are suitable for surgery, resection should be done. To deny anyone the benefits of such an operation is to deny them a chance for a normal life. When resection is successful there is no limit to their gratitude.

SUMMARY

The symptoms, pathology, and pathogenesis of bronchiectasis have been reviewed so as to lay a foundation for the intelligent treatment of the disease. Modern methods of treatment have been discussed with particular reference on the preventive aspect of treatment and surgical extirpation of the disease. A plea has been made for the recognition of the prebronchiectatic lesions and their elimination.

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Pulmonary tuberculosis is the most serious public-health problem in the Philippines. It exists throughout the islands in epidemic form, and it is estimated that 10 percent, or more, of the population suffer from it. The leading cause of death, it is responsible for from 15 to 20 percent of all deaths, and it is one of the leading contributors to the high infant mortality rate. The war not only increased all the predisposing factors, but destroyed most of the islands' means of coping with the disease.—Leroy K. Young, M. D., *Pub. Health Rep.*, Feb. 4, 1949.

The effect of the occupational environment upon the incidence and production of tuberculosis has been given careful study over many years. It is a fact that nurses and medical students are often subject to contact with an open carrier and therefore their respective occupations constitute a hazard peculiar to their occupation. As far as all other occupations are concerned, the evidence is, by and large, to the contrary.—Rutherford T. Johnstone, *Am. Rev. Tuberc.*, Oct., 1948.



## CLINICO-PATHOLOGICAL EXERCISE

## Case presented at Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

The 41-year old married white female was admitted to this hospital with the chief complaint of a mass in the abdomen. She had been told that she had a tumor in her pelvis four months before admission, but this had never caused her any symptoms until several weeks before admission, when she began to complain of a feeling of pressure in the lower part of the abdomen, similar to a feeling of tightness. She denied any trouble with her menstrual periods, which were regular every 26 days, the flow lasting 5 days, but the flow was described as always being profuse. She had had one normal delivery. There was no associated weight loss or bleeding between periods.

Past history was non-contributory; the patient had had the usual childhood diseases, appendectomy, pneumonia, and scarlet fever.

Systemic review was not remarkable.

Family history: Father died of heart attack; mother living, had mild coronary heart disease. One brother living and well; two sisters living and well, though one had "anemia."

Physical examination: Temperature 98.6°; pulse 76; respiration 20; blood pressure 120/60. Head symmetrical. Ears showed no discharge. Eyes: Pupils reacted to light and accommodation. Teeth were in good repair. Throat not injected. Neck: No adenopathy. Lungs: Clear and resonant; no rales heard. Heart: No enlargement, irregularity of rhythm, or murmurs. Abdomen: There was a mass the size of a four months pregnant uterus, with a palpable knob on the right. Extremities: No edema. No record of pelvic or rectal examination.

There is no history of any laboratory examinations.

On the second hospital day the patient was operated on, under general anesthesia. The following operative note was made: "Abdomen was opened by an incision from symphysis to umbilicus. The left tube and ovary, uterus, and practically all of the cervix were removed. The right ovary was cystic, and was partially resected. The right tube was left intact. The gall bladder was normal to palpation. The uterus was the size of a 4-5 months pregnancy. The tubes, ovaries, and posterior surface of the tumor and rectum, were all densely adherent, obliterating the cul-de-sac space. The rectum and uterus separated with difficulty. The firm adhesions of an inflammatory nature suggested extensive endometriosis or a malignant process. However, a diagnosis of malignancy could not be definitely made on frozen section. Because of this, and the patient's wishes, part of the right ovary

and part of the cervix were left intact. The abdomen was closed anatomically without drainage."

The postoperative course was uneventful, except for a slight elevation of temperature two days postoperatively to 101°, but this rapidly returned to normal. A rabbit pregnancy test of the urine performed two days postoperatively was reported as positive. The patient was discharged on the 19th hospital day.

## DISCUSSION

DR. ALLAN McLEAN: In this case we will not be helped by an autopsy report, and will rely on the report of the surgical specimen.

DR. PORTER: As far as I know, this patient is still alive.

DR. McLEAN: There has been a mass for four years, and post operatively it was discovered she had a positive A-Z test. This discussion will necessarily not be very long, since the man who was assigned to discuss this case is not present, and I have not had any preparation and have not read the case until I arrived here, this afternoon. This mass involved the uterus, tubes, and ovaries, but at operation a part of the tube, ovary, and cervix were left intact. It must have been the impression of the operator, on the advice of the pathologist, that this was a benign lesion; otherwise he would have done a complete hysterectomy. The cause of the positive A-Z test is usually pregnancy, but other things which may give it are hydatiform moles and teratomas. The description of endometriosis sounds pretty large for an endometriosis involving the left tube and ovary. I think, however, that there are three things to be considered: First, a four-months pregnancy, with endometriosis involving the left tube and ovary, and a leiomyoma on the anterior surface of the uterus. Second, hydatiform mole, of a non-malignant nature, plus the leiomyoma. And third, some type of lipoma lying in the pelvis, involving the uterus, and also a small fibroid. That, however, would not explain the A-Z test.

DR. JAMES PARKER: Supposing there is a tumor that produces a positive test, how long does the hormone remain in the blood?

DR. PORTER: Dr. Arthur Hertig has stated that it might remain positive for as long as 100 days. He has stressed that fact, since he feels that it is a poor way to follow a patient who has had a hydatiform mole, and whom you may suspect of undergoing malignant change.

*Continued on page 276*

## THE PRESIDENT'S PAGE

While we are all more or less engrossed in the political phase of American Medicine at this time, it behooves us not to forget the more fundamental facts of medicine, viz: the scientific and professional aspects.

Through trends or social progress we have been forced during the last two years to spend a lot of effort relating to the economic or political side of medicine.

Remembering the Hypocratic oath and the ideals of the profession, and its quest for scientific advancement, let us turn for a short period from the economic to the scientific. The Fall Clinical Session of the Maine Medical Association is to be held in Waterville, Maine, on November 6th and 7th. The local committee under Dr. Frederick T. Hill of Waterville is formulating a very interesting program. The details of this meeting will be published later, and the program will be excellent.

The House of Delegates will meet there on November 6th and will be able to familiarize itself with the progress made so far this year and will offer ideas and suggestions for the continuance of this program. The scientific and professional side of the program will be emphasized by interesting clinics and papers. The social and economic side of medicine will also undoubtedly be discussed.

Mark your calendar for these dates, November 6th and 7th, and plan to be there and support the organization and the local committee.

RALPH A. GOODWIN, M. D.,  
*President, Maine Medical Association.*



## EDITORIAL

### **Interim Session of the House of Delegates During Clinical Session at Waterville, November 6 and 7**

The Council and House of Delegates of the Maine Medical Association will meet Sunday afternoon, November 6, during the Fall Clinical Session to be held in Waterville; the Council will meet at 1.00 o'clock and the House of Delegates at 3.00.

This interim meeting of the House of Delegates was suggested and approved at the annual session in June, following considerable discussion during which it was evident that many members feel that they are not made sufficiently aware of the business of the association during the year, and are, therefore, not prepared to discuss and act upon matters presented at the annual meeting. The Order of Business for this meeting will be specifically designed to acquaint the delegates with the business of the Association and give them an opportunity to return to their county societies, discuss these matters, and receive instructions before attending the meeting to be held in April, and the annual meeting in June. It is hoped that the County Societies have been zealous in electing their delegates, and have chosen members who will attend this meeting prepared to participate in all discussions, and present to their respective county groups the results of the deliberations of the House in such a manner that all members can feel that they, through their delegates, have an active part in running the affairs of the Association.

Dr. Frederick T. Hill of Waterville is in charge of the Scientific Program for the Clinical Session. This program is in a preliminary stage at this writing but we can assure you that it will be "chock full" of interest.

The Sunday evening program will be open to the public. The speaker will be from the American Medical Association.

On Monday, November 7th, Clinical Sessions will begin at 9.30 A. M., and run all day. They will be held at the Central Maine Sanitarium, Sisters Hospital, and Thayer Hospital, and will include Surgery, Internal Medicine, Pediatrics, Obstetrics and Gynecology, Ophthalmology, Oto-Laryngology, Orthopedics, Rosentology and Tuberculosis. Added to this there will be a Conference on Hospital and Staff Problems at the Elmwood Hotel.

The dinner Monday evening will be held at the Elmwood Hotel at 6.00 P. M. There will be two speakers, whose names and subjects will be announced later.

The complete program for this session will be published in the October issue of the JOURNAL, and a copy sent to each member of the Association prior to the meeting.

Don't forget the dates — November 6 and 7. Don't forget the place — Waterville. Don't discount the value of any part of the program.

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## COUNTY SOCIETY NOTES

### Somerset

The annual meeting of the Somerset County Medical Society was held Tuesday afternoon, August 16, 1949, at the Lakewood Club House. A lobster dinner was enjoyed at the Inn by the members and their invited guests.

At the business meeting the following Officers were elected for the coming year:

President, Albert J. Bernard, M. D., Skowhegan.

Vice President, Harland G. Turner, M. D., Norridgewock.

Secretary-Treasurer, H. Carl Amrein, M. D., Madison.

Board of Censors: Drs. Edgar J. Smith, Maurice S. Philbrick, and Maurice E. Lord.

Program Committee: Drs. Paul R. Briggs, George E. Sullivan, and H. Carl Amrein.

Delegate to the Maine Medical Association, George E. Sullivan, M. D., Bingham. Alternate, Howard L. Reed, M. D., Skowhegan.

H. CARL AMREIN, M. D.,  
Secretary.

## NEWS AND NOTES

### Maine Medico-Legal Society

The Annual Meeting of the Maine Medico-Legal Society was held at Poland Spring, June 21, 1949, with President Romeo A. Beliveau, presiding.

The program consisted of:

- I. An excellent address by Forrest B. Ames, M. D., President of the Maine Medical Association.
- II. A fine talk by Chief of State Police, Col. Francis J. McCabe on "The State Police."
- III. Mrs. Frances G. Lee of Littleton, N. H., spoke very interestingly on the "Nutshell Laboratories" and the Legal Department of the Harvard Medical School, which she endowed. She also announced the formation of a Medico-Legal Society in New Hampshire. She had on exhibition one of her famous "Crime Scene" models which was viewed by about everyone at the Convention.
- IV. Dr. Richard Ford, head of the Legal Department of the Harvard Medical School, showed some highly interesting pictures, and described several unusual and instructive cases.

At the business meeting in the forenoon, Col. McCabe, Mrs. Lee, and Dr. Ford were elected Honorary Members of the Society.

The following officers were elected for the ensuing year:

President—Attorney General, Ralph W. Farris.

Vice President—Arch H. Morrell, M. D.

Treasurer—Walter S. Stinchfield, M. D.

Assistant Secretary—Benjamin Butler, Attorney.

Secretary—George L. Pratt, M. D.

GEORGE L. PRATT, M. D.,  
Secretary.

### Tumor Clinics

Sisters Hospital, Waterville, Maine, 1st and 3rd Thursdays, 10.00-11.00 A. M., Richard L. Chasse, M. D., Director.

Augusta General Hospital, Augusta, Maine, 1st Monday, 9.00 A. M., Leon D. Herring, M. D., Director.

Bath Memorial Hospital, Bath, Maine, 2nd Tuesday, 3.00-5.00 P. M., Francis A. Winchenbach, M. D., Director.

Maine General Hospital, Portland, Maine, Thursdays, 10.00 A. M., Joseph E. Porter, M. D., Director.

Presque Isle General Hospital, Presque Isle, Maine, Thursdays, 10.00-12.00 A. M., Storer W. Boone, M. D., Director.

Madigan Memorial Hospital, Houlton, Maine, 2nd and 4th Wednesdays, 10.00-12.00 A. M., Joseph A. Donovan, M. D., Director.

Central Maine General Hospital, Lewiston, Maine, Tuesdays, 10.00 A. M., Waldo A. Clapp, M. D., Director.

St. Mary's General Hospital, Lewiston, Maine, Wednesdays, 3.30 P. M., Romeo A. Beliveau, M. D., Director.

Eastern Maine General Hospital, Bangor, Maine, Thursdays, 10.30 A. M., Magnus F. Ridlon, M. D., Director.

Thayer Hospital, Waterville, Maine, 2nd and 4th Thursdays, 10.00-11.00 A. M., Arthur H. McQuillan, M. D., Director.

Department of Health and Welfare

Services for Crippled Children

Clinic Schedule — 1949

ORTHOPEDIC CLINICS

Portland — Maine General Hospital, 11.00 a. m.: Jan. 10, Feb. 14, Mar. 14, Apr. 11, May 9, June 13, July 11, Aug. 8, Sept. 12, Oct. 10, Nov. 14, Dec. 12.

Lewiston — Central Maine General Hospital, 9.00-11.00 a. m.: Jan. 21, Feb. 18, Mar. 18, Apr. 15, May 20, June 17, July 15, Aug. 19, Sept. 16, Oct. 21, Nov. 18, Dec. 16.

Rumford — Community Hospital, 1.30-3.00 p. m.: Mar. 16, June 15, Sept. 21, Dec. 21.

Waterville — Thayer Hospital, 1.30-3.00 p. m.: Feb. 24, Apr. 28, June 23, Aug. 25, Oct. 27, Dec. 22.

Rockland — Knox County Hospital, 1.30-3.00 p. m.: Feb. 17, May 19, Aug. 18, Nov. 10.

Machias — Normal School, 1.30-3.00 p. m.: Feb. 9, Apr. 13, June 8, Aug. 10, Oct. 12, Dec. 14.

Presque Isle — Northern Maine Sanatorium, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 11, Mar. 8, May 10, July 13, Sept. 13, Nov. 2.

Houlton — Aroostook General Hospital, 9.00-11.00 a. m.: Mar. 7, July 12, Nov. 1.

Fort Kent — Normal School, 9.00-11.00 a. m. — 1.00-3.00 p. m.: Jan. 12, May 11, Sept. 14.

Bangor — Eastern Maine General Hospital, 1.30-3.00 p. m.: Jan. 27, Mar. 24, May 26, July 28, Sept. 22, Nov. 17.

CARDIAC CLINICS

Portland — Maine General Hospital, 10.00-12.00 a. m.: Will be held every Friday with the exception of holidays.

Bangor — Eastern Maine General Hospital, 9.00 a. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

HARD-OF-HEARING CLINICS

Waterville — Thayer Hospital, 1.30-3.00 p. m.: Feb. 16, June 22, Oct. 19.

By appointment only.

PEDIATRIC CLINIC SCHEDULE — 1949

Bangor — Eastern Maine General Hospital, 1.30 p. m.: Jan. 28, Feb. 25, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 18, Dec. 16.

Waterville — Thayer Hospital, 1.30 p. m.: Jan. 4, Feb. 1, Mar. 1, Apr. 5, May 3, June 7, July 5, Aug. 2, Sept. 6, Oct. 4, Nov. 1, Dec. 6.

Presque Isle — Northern Maine Sanatorium, 1.30 p. m.: Jan. 26, Mar. 23, May 25, July 27, Sept. 28, Nov. 16.

By appointment only.

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Department of Health and Welfare  
Division of Mental Health  
Clinic Schedule

The Division of Mental Health offers psychiatric clinic service to children and adults in the following cities:

*Portland* — Health and Welfare Department, 178 Middle Street. Every Tuesday.

*Lewiston* — Out-Patient Department, Central Maine General Hospital. 2nd and 4th Mondays.

*Augusta* — Bureau of Health, Division of Mental Health. By appointment.

*Waterville* — Out-Patient Department, Thayer Memorial Hospital. 2nd Thursday, 4th Wednesday.

*Bangor* — Out-Patient Department, Eastern Maine General Hospital. 1st Wednesday afternoon.

Valentine School, Union Street. 1st Thursday.

A traveling clinic visits the following towns and cities at irregular intervals: Brunswick, Caribou, Farmington, Fort Kent, Houlton, Lincoln, Machias, Old Town, Presque Isle, Rockland, Rumford and South Paris. All clinics are staffed by a psychiatrist and psychologist.

Referrals may be made by private physicians, parents, families, social agencies, school superintendents, Department of Education, all divisions within the Department of Health and Welfare. Application blanks may be obtained from the main office of the Division of Mental Health — State House, Augusta.

Patients are seen by appointment only. Each child must be accompanied by a parent or guardian. Applications should be sent to the Director, Division of Mental Health, Department of Health and Welfare, State House, Augusta, where all appointments are made.

HOSPITAL STAFF MEETINGS  
Open to the Profession

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General St. Mary's General	1st Monday 2nd Monday
Portland	Maine Eye and Ear Infirmary Maine General Mercy	1st Tuesday 2nd Friday 3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters Thayer	2nd Tuesday Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.

Proceedings

NINETY - FIFTH ANNUAL SESSION

Maine Medical Association

House of Delegates

POLAND SPRING, MAINE

June 19, 20, 21, 1949

The First Meeting of the House of Delegates of the Maine Medical Association convened at the Poland Spring House, Poland Spring, Maine, on Sunday afternoon, June 19, 1949, at 3:15 o'clock, with Dr. Ralph A. Goodwin, President-Elect, presiding.

CHAIRMAN GOODWIN: The meeting will please come to order. I am glad to welcome the Delegates in official session here today.

First, I shall ask our Secretary, Dr. Frederick R. Carter, for the roll call.

[Secretary Carter then called the roll, and thirty-four delegates responded.]

CHAIRMAN GOODWIN: The first thing on the agenda is the appointment of a Reference Committee, and I will appoint the following: Foster C. Small, Chairman, P. L. B. Ebbett, Franklin F. Ferguson and C. W. Kinghorn.

For the Nominating Committee, I appoint the following: Delbert M. Stewart, Chairman, James M. Parker, Robert W. Belknap, Charles E. Towne, James H. Crowe and Clyde I. Swett. This Committee will draw up a slate of Standing Committee members and report to the second meeting of the House of Delegates on Monday at five o'clock.

We shall now have a report from the councilors who have not submitted their reports for publication in the JOURNAL.

DR. C. HAROLD JAMESON, Rockland, Councilor, Third District: The Knox County Society held well attended monthly meetings addressed by out of state or local speakers. The interest has been increasingly evident stimulated by the greater percentage of membership of younger men who have entered the medical community in the past few years.

The Lincoln-Sagadahoc Society held eight meetings which have been interesting and well attended. Their assemblies have been held in different towns of the two counties. A feature of interest has been the holding of joint meetings with the County Dental Society, promoting good fellowship and increased interest for both groups.

DR. MARTYN A. VICKERS, Bangor, Councilor, Sixth District: I will make mine very short. I will be like the after-dinner speaker, who didn't speak.

I served because of the death of Dr. Herlihy.

Our District is very happy. There was one matter that was discussed before the Council, and it will be further considered today.

Everybody in the District is happy and wishes everybody else is the same. Thank you! [Applause]

CHAIRMAN GOODWIN: Thank you.

Is there to be a report from the Committee on Civilian Defense? Is Dr. Steele here? He is not here, so we will postpone that.

Is Dr. Foster here to report for the Committee on Maternal and Child Welfare?

DR. THOMAS A. FOSTER, Portland: The Committee on Maternal and Child Welfare have not had a meeting. The Committee feels that its work is involved with the report of the Study of Child Care, which we hope will soon be published. Therefore, we are waiting for that report before hav-

ing a meeting. We hope the data gathered by that questionnaire will be published shortly after the annual meeting. The report has been written and is now being revised and will be in the hands of the printer this summer, and in the hands of the members of this Association in the fall.

CHAIRMAN GOODWIN: Is Dr. Merrill Greene here, to give the report of the Committee on Industrial Health? As he is not present, we will postpone that Committee report, until the next session.

Next is the report of the Committee on Veterans' Affairs, by Dr. Harold Pressey.

DR. FORREST B. AMES, Bangor: As Dr. Pressey was unable to be here, he asked me if I would read his report.

June 17, 1949.

To Members of the Maine Medical Association:

Gentlemen:—During the fiscal year from May, 1948, to May, 1949, in the area allotted to the Bangor office the V. A. has authorized and paid to the physicians of this particular area 18,900 treatments and examinations. This totals \$94,000.00. This area comprises 36% of the total area of the State of Maine. In Maine as a whole, we have a total of 110,000 veterans, some of whom receive pensions and others do not. However, any of the 110,000 veterans is entitled to treatment for service or non-service connected disabilities, at the V. A. facility at Togus, providing that they are willing to accept such services.

However, there are certain rules and regulations that must be followed, as you know, with a certain amount of paper work which has been reduced to a minimum. I am fully cognizant of the fact that the doctor who does not have a secretary or office nurse may even find this task irksome.

Now as to some of the information which you may or may not know about:

1. Request outpatient treatment for service connected disabilities within the calendar month only, not for an indefinite period of time.
2. Requests for treatments for the next month must be in by the 20th of the preceding month.
3. Emergency treatments need not be reported for 15 days.
4. Reverse telephone charges when in doubt as to authorizations, or for information concerning treatment or entrance to Togus to the regional offices or Togus itself.
5. Don't try to "kill the Goose that laid the golden egg!" By that we mean do not request 16 or more outpatient treatments when 3 or 4 would be satisfactory. You might have to pay back to the Government the unnecessary treatments if investigated.
6. Don't send in reports of treatments when the veteran is already a patient at Togus.
7. Remember no reports—no pay.
8. Also remember in your monthly reports, give the board adequate information concerning complaints, physical findings and treatment. For the most part these are most inadequate. You do better for insurance companies.
9. Give the veteran a break while profiting yourself.

HAROLD E. PRESSEY, M. D.,  
Chairman.



CHAIRMAN GOODWIN: Next, we will have the report of the Chairman of the Council, by Dr. Jameson.

DR. JAMESON: The Council has met six times during the past year, and I will try to give you a summary of their activities, without going into too much detail.

The Council, of course, is compelled to carry on the active business of the Association, during the long months when the delegates are not in session, and take care of the various problems which come up.

The first meeting was held on June 22nd, during the annual meeting last year. At that time, the new Council was formed, and I was elected Chairman for the ensuing year.

W. Mayo Payson, was re-elected Executive Secretary of the Association, Frederick R. Carter was re-elected Secretary-Treasurer of the Association and Editor and Business Manager of the JOURNAL, and Esther M. Kennard re-elected Assistant Secretary and Assistant Business Manager.

The second meeting was held on August 1, 1948, at Lucerne-in-Maine. At that time, the 95th Annual Session of the Maine Medical Association was discussed, and it was voted to have the meeting here at Poland Spring, during these present days.

Dr. Vickers, Chairman of the Scientific Committee, was present, and at his request, it was voted to poll the Association members and see if the Committee could obtain from them ideas and suggestions as to the type of meeting to be held at this time.

There was discussion in regard to the National Physicians' Committee Annual Meeting in Chicago, and it was voted that the President, Dr. Ames, appoint two members as delegates to that meeting, and that the Association pay their expenses, the idea being that the National Physicians' Committee was doing valuable work, and that in addition to the two members who attend that meeting with expenses paid by N. P. C., we should send two more at our expense, in order that more individuals would be available to acquaint our members with their activities.

Also at that meeting of the Council, it was voted to accept the invitation from the Cumberland County Medical Society to hold the Fall Clinical Session in Portland.

The third meeting was held at Portland, during the Fall Clinical Session in November. At that time, the Vermont Society inquired as to the possibility of utilizing the JOURNAL of the Maine Medical Association, as its official organ. The Council voted to advise the Vermont Society that we would be happy to have their articles for publication in the JOURNAL, but felt that we should maintain the independence of our own JOURNAL.

At that time, the unfortunate death of Edward Herlihy occurred at Portland, and it was voted to draft a resolution, to be sent to the newspapers and to Mrs. Herlihy, signed by the President and Council Chairman.

Dr. Martyn Vickers of Bangor was appointed by the President as Councilor for the Sixth District, to fill out the unexpired term of Dr. Herlihy.

As was the custom, the Chairman of the Scientific Committee, advised the Council as to the plans of his Committee for the approaching Scientific Program.

It was voted by the Council to authorize the appointment of a Public Relations spokesman in each society; the spokesman to receive instructions relative to his duties from the Public Relations Committee.

It was voted that the President and the President-Elect make suggestions to replace Dr. Herlihy on the Medical School Committee in the near future.

The fourth meeting was held at Augusta on January 26, 1949. At that time, there was a somewhat heated discussion, as I recall it, regarding the use of the prefix "Doctor" by the dentists, and it was voted that the Maine Medical Association make no attempt to defeat their amendment. The Council did not wish to resist passage of any such bill, in fact, they sent a message to the State Dental Society, informing them that we will be glad to have them use the title "Doctor" if they wish, and Mr. Payson was instructed to give them unqualified support, without limitations.

It was voted to accept a resolution that the State Associa-

tion undertake to collect the \$25.00 special assessment suggested by the American Medical Association.

There was discussion regarding the efforts of the Maine Hospital Association to obtain increased appropriations for hospital care for State aid cases, and it was voted that the Council endorse and support their efforts.

It was also voted that the Council go on record as backing the efforts to get increased appropriations for State institutions.

Incidentally, Mr. Payson was constantly working, as it proved, in vain, to obtain these additional appropriations. You will learn in detail about that later.

It was voted to increase Miss Gooch's salary to \$2,000; she is Mr. Payson's Secretary.

The fifth meeting of the Council was held on May 11th, at Augusta. At that time, Dr. Carter reported that \$11,415.00 had been received from members, to date, for the A. M. A. assessment.

The Council voted that our delegate to the A. M. A. be sent uninstructed. At that time, also, a request for a \$300.00 appropriation to the Health Council of Maine was received, and, not being too familiar with the activities of the Health Council, it was voted to delay action until we learned a little bit more about it.

It was voted to order Fifty-Year Medals for the following members: Albert D. Foster of Portland, Walter E. Tobie of Portland, Percy S. Merrill of Waterville, John B. Thompson of Bangor, Eugene D. Tapley of Belfast, Fitz E. Small of Biddeford, and Howard A. Milliken of Hallowell.

In regard to the National Physicians' Committee, the Council was advised by Dr. Vickers that that Association was disbanding, and that any checks that had been sent in since February, 1949, had been returned.

Dr. Drake discussed the Association's prepaid medical care plan, telling us that the Committee had been active; that 35 per cent of the members of the State Association had enrolled, and that a form letter was to be sent to the members who had not yet enrolled.

Policies have been received from several companies, and at that time, five had been approved.

There was some discussion regarding the Board of Registration of Medicine, and it was suggested that the Council take some action and recommend to the Governor the names of members who might be suitable for vacancies on the Board. The President wrote the Governor, asking him if he would accept or welcome suggestions for the two vacancies, then imminent. He did so, and the Governor apparently was pleased to receive suggestions of names. The Council endeavored to find out from all over the State, through its various Councilors, the names of two men from each Councilor District who might be interested and Dr. Ames sent the Governor a list of eight names, which was the number he obtained. We understand that recently the eighth appointment, which apparently was very satisfactory, was made, but it did not happen to be selected from those names we had offered; however, I am sure the candidate was a very acceptable one.

There were discussions regarding the Women's Auxiliary, and it was learned that several counties have had organizational meetings, and that they plan to meet during the present session of the Maine Medical Association.

There was some discussion about the relations with the Maine Dental Association. It was the opinion of the Council that it would be wise as well as pleasant to cement our relations with the Maine Dental Association. It was voted that the President-Elect attend the Dental Society meeting as a delegate, and that he extend our greetings.

It was voted that the President write to the President of the Dental Society, suggesting an annual interchange of official delegates.

Mention was made of the Maternal and Child Institute for Pediatrics, to be held in Bangor this fall. It was voted that the Council endorse the Institute of Pediatrics.

There was a discussion of the speakers on socialized medi-



cine. Mr. Payson stated that Dr. Frederick T. Hill, Chairman of the Public Relations Committee, wants speakers to speak throughout the State.

There was a brief report by Mr. Payson, whose full report will be given to you later. But, at that meeting, he reported briefly, relative to the Legislation Session. He stated that the requests for increased appropriations for State aid cases were discarded, when the tax measures were defeated. He advises that the Dental Legislation was passed. The Attendant Nursing Bill, outlined by Dr. Swett was defeated. The bill on pollen and fungus studies presented by Dr. Vickers, was passed.

The various Councilors were asked to comment, this being essentially the final meeting, and the only comment was from Dr. Vickers, who stated that the Penobscot Society members want the opinion of the work of the Executive Secretary. There followed some discussion, and the Council approved of the excellent work of Mr. Payson as Executive Secretary.

That brings the report up to date as of today, and if I can find a note here, I will tell you in brief what was done in this meeting today.

Of course, the budget was reviewed.

Another matter of considerable importance was the report of the work of the Health Council of Maine by Dr. Frederick T. Hill. The Council, having become aware of what is apparently an excellent work in the field of public relations and publicity through the radio and speakers and newspaper outlets, particularly those in the smaller communities reaching into the farm groups and into the smaller towns, appropriated \$300.00 for the Health Council of Maine. [Applause]

CHAIRMAN GOODWIN: Next on the agenda is the presentation of the 1949-1950 budget as recommended by the Council, by Dr. Jameson as Chairman of the Council.

DR. JAMESON: The Council reviewed the Budget figures for 1948-1949 and 1949-1950 and discussed each item.

In the budget for 1948-1949, there was an item of \$350.00 for the President's expenses; he spent exactly \$350.00. And, as we thought that Ralph would probably do the same, we have put in exactly the same amount as a suggested item for the President's expenses.

The Secretary-Treasurer and Editor's salary has been \$4,000.00, and, realizing how much he is doing, the Council felt that he should have a nominal increase, and suggested \$4,500.00.

The Assistant Secretary's Salary has been \$3,000.00 and that figure is recommended as carrying over in the new budget, unchanged.

The Secretary-Treasurer's expenses, the appropriation last year was \$300.00, and \$149.26 was expended. So it is recommended to cut that down to \$200.00.

The office of the Secretary-Treasurer had appropriated last year the sum of \$1,200.00, and the sum of \$1,221.46 was expended. The recommended figure, there, is the same as last year, \$1,200.00.

The Medical Advisory Committee last year had a figure in the Budget for this past year of \$1,000.00. That is Mr. Locke's salary, which I think we all feel he earns. The same figure was carried over again into the new budget.

For some years, there has been appropriated for the Committee on Graduate Education \$100.00. This was not expended; but, it was re-appropriated in the same amount of \$100.00.

The expenses of the Special Committees, in the Budget, were \$500.00, for last year. They spent \$123.36. We think that they might spend it, if they realized that it might be available for some of their expenses, which should be taken care of by the society. So that \$500.00 for special committees is recommended.

The figure for expense of our State delegates to New England Medical Societies and the Council, last year was \$500.00; \$494.55 was expended. It is recommended that the same amount be appropriated for the coming year.

The Delegate to the American Medical Association received an appropriation in the past Budget of \$400.00. He spent \$358.02. During the coming year, our Delegate will be obliged

to go to Los Angeles, and there will also be an interim meeting; so that instead of \$100.00, the Council suggests \$700.00, which may not be quite enough, but that is the figure suggested.

Last year, \$300.00 was appropriated for the Fall Clinical Session. Somewhat less than that was spent, \$259.27; but, the same figure is suggested again for the coming year.

Last year, \$100.00, was appropriated, as it has been for several years, for the New England Council; that is, as a matter of fact, considered as dues to the New England Council, which was organized three or four years ago, and which seems to be proving of increasing value. I had never had occasion to attend one of the meetings, except the one this past year, and I went simply because I was interested to hear these people who are arranging the educational campaign for the Pacific Coast. That meeting was held at the Statler, and there were probably 500 people there, and it was a most interesting meeting. That is one of the things that I know of that they accomplish. This \$100.00 item has been recommended in this year's budget, unchanged.

The Salary of the Executive Secretary, W. Mayo Payson, has been \$6,500.00, and the Council recommends an increase of \$500.00.

For the Executive Secretary's office, the amount has been \$5,500.00, and that same figure is recommended for the next year.

Then, in addition, the Council recommended an appropriation of \$300.00 for the Health Council of Maine.

That makes the grand total of \$25,250.00, recommended for 1949-1950; that being in contrast to \$23,750.00, the budget for 1948 and 1949.

CHAIRMAN GOODWIN: You have heard the report of the Chairman of the Council for the Budget Committee for 1949 and 1950. I await your pleasure on this matter. Is there any discussion? Are there any recommendations or suggestions?

DR. KINGHORN: I recommend that the Budget be accepted, as read.

*This motion* was duly seconded by several of the members present and was carried.

CHAIRMAN GOODWIN: The next item on the program is a report of the Delegate to the American Medical Association, Dr. Thomas A. Foster of Portland.

DR. FOSTER: Last year, it was my misfortune to miss the meeting, here, because of my attendance at the meeting of the American Medical Association in Chicago. It is the first time that I have missed the meeting of the Maine Medical Association in a great many years. It is more fun to be in Poland Spring than in Chicago in June.

I want to thank the members of the House of Delegates for electing me as a Delegate of this Association for another year. I appreciate it very much, and I only regret not being here for your deliberations and program of last June.

The meeting this year at Atlantic City was a great meeting.

This year, it was a pleasure to see in the registration more men from Maine than ever before, at least since I have been going as a Delegate. I didn't see many of the men from Maine, but I know that there were more men registered this year than any year previously since I have been a delegate.

The 98th annual meeting of the American Medical Association was held at Atlantic City, June 6-10, 1949. The House of Delegates was called to order by Dr. Frank Borzell, speaker of the house, at 10 A. M., June 6th. All but 2 or 3 delegates were in their seats to answer the roll call. The first official business, as usual, was the selection of a fellow to receive the Distinguished Service Award. Three candidates were presented by the Chairman of the Board, Dr. Elmer Henderson. They were: Dr. Seale Harris, Dr. Alfred Blacklock, and Dr. Shields Warren. Dr. Seale Harris was selected to receive the medal.

The report for the Board of Trustees Supplemental Report, and the report published in the Handbook, was presented first. Included in this report is the report of treasurer and official report of auditors. The financial structure of the association is sound. The association is in the black by a solid margin and the outlook is favorable. The Secretary's report is pre-



sented at Interim Session which is held at the year's end, so that no report from the secretary was presented at this meeting.

New business introduced by resolutions from State and County societies and individuals, covered a wide variety of subjects.

Reports from the Blood Bank Committee, Nursing Committee, and the Medical Advisory Committee were read and approved. All these committees are making progress. Two special reports created widespread interest, namely, the report entitled "Activities of the Editor" and the special report on the Practice of Medicine and Hospitals developed by a special committee under the Chairmanship of Dr. Elmer Hess and forwarded to the Trustees.

The report entitled "Activities of the Editor" outlined definitely the field of endeavor which the editor of the *Journal* should pursue. The Reference Committee to which the report was referred, recommended that the report be accepted by the House of Delegates, and the recommendation was adopted.

The Hess report stated that the Practice of Medicine by Hospitals was unethical and illegal. In support of this statement, it quoted from the A. M. A. "Principles of Ethics and Court Decisions." The report outlined procedures under which doctors and hospitals should cooperate for the best interests of the patient and the community. It laid down the principle that no hospital has the right to sell a doctor's professional service for profit to the hospital, and the principle that in medical care, the doctors should be dominant. And it made a plea for cooperation and referred to the report adopted recently by the Massachusetts Medical Society.

The report recommends that every constituent state and territorial society appoint a committee on hospital and professional relations. This committee to be available to view complaints from any physician, hospital, medical organization, or any other interested person or group with reference to professional or economic relation existing between doctors of medicine and hospitals or medical schools. Upon receipt of such complaint by such committee, the matter shall be investigated and acted upon in such manner as that committee may decide, and in accordance with regular and existing modes of procedure. The subject of hospital practice of medicine is a "live issue." The doctors, as represented in the House of Delegates, made it clear that they do not intend to be submerged by the hospitals so far as the practice of medicine is concerned.

The President, Dr. R. L. Sensenich, in his remarks to the House, developed four subjects:

1. Medical Education. Question of how much and how to use government money.

2. National Emergency Medical Services. Government trained students must enlist. Question of the draft. Improved distribution of assignments and more reward and equitable promotions.

3. Compulsory sickness tax, medicine or health insurance. He said that people do not want it. People value freedom too much.

4. Cooperation is not compliance and is not compromise, but cooperation by careful steps.

A new set of Principles of Ethics was adopted. Rebates, sale of drugs for profit was considered unethical.

Whitaker and Baxter spoke.

Miss Baxter spoke first and reported that the educational campaign was rolling up widespread understanding and support. Mr. Whitaker, this delegate thought, spoke over long but with an earnestness that was pretty convincing. People who have had a chance to talk with him say that he is an able fellow, has an amiable nature, a good deal of fervor and plenty of "know how." The general feeling seemed to be one of satisfaction up to this point. Every doctor and every doctor's family was urged to take part in the campaign.

The next Interim meeting will be held in Washington, D. C., December 6-9, 1949. An excellent program is being arranged. The next annual meeting will be in San Francisco, June 26-30, 1950.

CHAIRMAN GOODWIN: Thank you very much, Dr. Foster,

for this interesting report of the American Medical Association convention and the House of Delegates' meeting.

DR. FRANK A. SMITH, Westbrook: Did I miss it in your report? Was there something controversial in regard to Child Welfare and what did the Delegates do about that?

DR. FOSTER: I don't know to what Dr. Smith refers.

DR. FRANK SMITH: It had been endorsed by all Parent-Teachers' Associations, all over the country. It was quite a surprise.

DR. FOSTER: There was a somewhat ominous bill that recommended that the Federal money be used by the States to give children certain advantages. Section 3 of the bill clearly stated that every child from the age of 5 to 17 could have free medical treatment in school.

Now, the Delegate from the Board of Trustees had appeared at a hearing in Washington, and the Delegate had said that the American Medical Association supported health measures for children, in accordance with its 12-point program, which was developed by the Board of Trustees, and reported to this meeting that it was an excellent program. However, the Delegates from the south, the mid-west and the west disapproved of that bill. The hearing had been before the House of Delegates. One of the Trustees had been at the hearing, and said that the A. M. A. had approved of a bill for Child Health, and this was recommended. It was introduced into the House of Delegates, and was referred to a Reference Committee. The Reference Committee said that it should be adopted, but, the A. M. A. did not recommend the bill. The House of Delegates approved it. The Trustees asked for a clarification on it. They wanted to be more specific. It was referred to another Committee, and that Committee brought back a report that they were against socialized medicine, but, in pointing out their opposition, the Trustees could show why they were in favor of it, in line with 12-point Health Program, and when it was in line with the 12-point Health Program, they would approve it.

In other words, the Delegates were opposed to approving it, because it had the section in it, giving medical care to all children 5 to 17.

DR. FRANK SMITH: Can this be clarified for the public, then?

DR. FOSTER: Yes; it can be clarified. It was called a trick bill. It is a cagey bill. It is an appeal for sympathy, to help children who need help, because in that bill was slipped in the free medical care for children from 5 to 17 years old.

CHAIRMAN GOODWIN: Is there any further discussion on this report? If not, I await a motion for its acceptance.

DR. FRANK SMITH: I move that the report of the Delegate to the A. M. A. be accepted.

*This motion was duly seconded and was carried.*

CHAIRMAN GOODWIN: We shall now have the reports of the Delegates to the New England Medical Society meetings. The Delegate to the Connecticut State Medical Society is Dr. Donald F. Marshall of Portland.

DR. DONALD F. MARSHALL: Mr. President and members of the House of Delegates. The Connecticut State Medical Society meeting was held on May 3, 4 and 5, in New Britain. It was a very enthusiastic meeting, and there were about 1,000 members present.

The Society was headed this year by Sam Harvey, formerly Professor of Surgery at Yale School of Medicine.

Briefly, the three outstanding papers were given by Dr. Rafton from Philadelphia on "Diseases of the Gall Bladder and the Common Duct." He and his group in Philadelphia have developed an electrical gadget which explores the Common Duct and every time the needle point, which is a flexible metal point, touches a stone in the Common Duct, it is recorded on this electrical machine, and he gave a very, very good paper on this particular subject.

Another outstanding paper was given by Dr. Willard Allen, Professor of Obstetrics and Gynecology at the University of St. Louis on "The Uses and Abuses of the Estrogens." I think that that was very well done and a very pointed paper.

The third paper was actually a symposium on "Nephritis" and that was presented by a group at the Peter Bent Brigham



Hospital. It was very well presented. They showed the mechanism and use of the artificial kidney, with which they have gone forward very nicely in Boston. Briefly, they use this artificial kidney now, for patients with far advanced renal disease, and they are using it more recently in cases that have gone into acute anuria, so to speak. That is, they are using it earlier in the disease, within the first four or five days, and have gotten some remarkable results.

The program wound up with a fine dinner on the third evening, when the members and their wives were present and everybody had a fine and busy time. They had a humorous speaker at the dinner; he turned out to be a minister from New York and for almost an hour, it seemed as though everybody was practically rolling in the aisles.

The entire program was very nicely put across. I must say that there is a very warm and friendly feeling between the Connecticut State Medical Society and the Maine Medical Association.

I really feel that it was a great privilege that was given to me by the Maine Medical Association to attend this meeting. [Applause]

CHAIRMAN GOODWIN: Thank you, Dr. Marshall. The Delegate to the New Hampshire Medical Society was Paul S. Hill, Jr. of Saco.

DR. PAUL S. HILL, JR.: Mr. President and Delegates. It was my pleasure to be present, again, this year at the 158th Annual Meeting of the New Hampshire Medical Society at the Hotel Wentworth at Newcastle. The meeting was again held without any commercial exhibits. It was a very interesting and a very instructive meeting, from the scientific point of view. Many of the papers were by the members of the Society. A few of them were by outside doctors. Wallace E. Herrell of the Mayo Clinic gave a fine paper on the "Present Status of Antibiotic Therapy." Dr. Frank Lahey of Boston, as usual, gave a splendid presentation of the "Surgical Management of Lesions of the Terminal Ileum and Colon."

The New Hampshire Medical Society voted to increase their annual dues from \$10.00 to \$40.00, thus completing the roster of the States which have found it necessary to combat socialized medicine.

Apparently, they have a fund in New Hampshire for the purpose of taking care of those physicians who have grown old and have no means of support. I think that this is a fine thing, and they use the interest on that money to do that fine work. Every year, they collect \$1.00 from each member for this purpose.

We have in this State a doctor who was once a county secretary, who has lain for two years in a ward bed in the hospital, without funds or assistance.

Every year, the New Hampshire Society presents a prize of \$100.00 and another prize of \$50.00 to the men who send in the best essays on a subject which they may choose themselves. These essays are sent in anonymously. That, too, is a very fine thing.

The annual banquet was held on the second night this year instead of the third night, with the idea that the attendance might be better, and it was. A cocktail party was held first, with the compliments of the New Hampshire Society.

Governor Sherman Adams of New Hampshire gave a very inspiring and stirring address, touching upon the political issues which face our profession at the present time.

General George F. Lull, Secretary of the American Medical Association, gave a very fine address, also. He talked principally about the steps that have been taken in the crusade against compulsory medical care.

In conversation afterwards with him, General Lull pointed out that it was quite necessary that the younger men who have so much at stake should turn out and start getting into the matter deeply.

In conclusion, he told the story of a place where socialized medicine had gone into effect, and a man decided that he would like to have an examination. So he went down to the Bureau of Health and knocked on the door and went in. There was a Secretary there who took his name, address and serial number, his dog tax number and social security number, and said to him: "Now, you go down that corridor and go right through the door there."

He did that, and when he went through the door, he found there were two doors facing him, one marked "Men" and the other marked "Women." So he went through the door marked "Men" and another Secretary met him and asked him his name, serial number, how much money he made, etc. Then she said to him: "You go down the corridor there, and go through that door."

So he went down the corridor, went through the door, and found himself confronted, again, with two doors marked "Old Men" and "Young Men," so he went through the door marked "Young Men" and who should he meet but another Secretary, who looked over his dog tag, got his serial number, his social security number, the size of his shoes and things like that. Finally, she said to him: "Now, take off your shirt, and the Doctor will examine you."

The doctor came over with a stethoscope in his hands, and he listened for a few minutes and then he said to this chap: "Now, you go down to the end of the corridor here, and go through that door."

Well, he did that, and again, he found himself confronted with two doors, one marked "Democrats" and the other marked "Republicans." So he went through the door marked "Republicans" and he found himself out on the street, without his shirt! [Laughter]

CHAIRMAN GOODWIN: Thank you very much, Dr. Hill, for that report.

The Delegates to Massachusetts, Rhode Island and Vermont were unable to attend those meetings.

(To be continued in the October issue of the JOURNAL.)

The logo for Zemmer Pharmaceuticals features the word "Zemmer" in a large, stylized, cursive script. Below it, the word "PHARMACEUTICALS" is written in a bold, sans-serif, all-caps font. The background of the logo is a grid of small squares, some of which are shaded.

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*Clinico-Pathological Exercise—Continued from page 264*

DR. CHARLES GLASSMIRE: Would flowing be consistent with a 4-months pregnancy?

DR. McLEAN: Yes, it could occur, but I believe this history was entirely inaccurate, and I would go on the physical findings.

DR. PORTER: It says she denied any trouble with her menses.

DR. ROBERT LORIMER: She could have had a bicornuate uterus, and menstruated from one side, and have been pregnant in the other cornu.

DR. McLEAN: A woman could be pregnant with endometriosis, but at the age of 41, I do not give her a good chance of being pregnant.

DR. PORTER: I would like to hear some other impressions of this problem.

DR. ROLAND MOORE: My guess would be probably chorionepithelioma.

DR. PARKER: Supposing she were sterile; what would be the chances of a mole appearing after pregnancy?

DR. PORTER: My impression is that it does not remain latent, and then become active several years later.

DR. GLASSMIRE: Do they develop or remain inactive? If this had been 10 or 15 years, would that be too late to develop?

DR. PORTER: Yes, I believe so.

DR. McLEAN: The chorionepithelioma is ruled out,

because she is still alive. In the history of the periods, she has had perfectly normal ones, and she would have an abnormal flow, so I prefer to give my attention to endometriosis and pregnancy.

DR. McLEAN'S DIAGNOSIS: 1. Pregnancy. 2. Endometriosis involving left tube and ovary. 3. Leiomyoma of uterus.

DR. PORTER: The specimen received in the laboratory consisted of an enlarged uterus, with left tube and ovary attached. There was a leiomyoma present in the uterine wall, measuring about 7 cm. in diameter. There was a well-defined decidual reaction, which was found on microscopic examination. If there had been a fetus present it must have been removed before the specimen was sent to the laboratory. The left tube was very greatly enlarged as a result of a tumor-like growth which surrounded it. On microscopic examination this was found to consist of very diffuse and well-defined decidual reaction; in the centers of many of the cell masses there were found glands which were characteristic of endometrial glands. Microscopic examination of the myometrium showed foci of endometriosis, without any decidual reaction. In summary, then, this woman was pregnant; the uterus was consistent in size with a 4-months pregnancy; however, I do not know the size of the fetus. There was a benign leiomyoma in the myometrium, and there was a tumor-like growth involving the left tube, which was due to a decidual reaction, most probably arising in focal endometriosis of the tube.



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## A COMPARISON OF THE ANTIDIURETIC EFFECT OF DEMEROL AND OF METHADON ON MERCURIAL DIURESIS IN CONGESTIVE HEART FAILURE

### A Case Report

CHARLES W. STEELE, M. D., F. A. C. P.\*

Investigators have studied the effect of morphine on water elimination in animals since 1887; and this experimental work has shown that morphine inhibits water diuresis. (For a comprehensive review of the literature covering the results of the above experimental studies on the effect of morphine on water elimination in animals, the interested reader is referred to a recent paper by Ferrer and Sokaloff.<sup>1</sup>)

DeBodo has published the results of detailed pharmacologic studies in which the antidiuretic effect of morphine in animals was demonstrated and the mechanism of this action was discussed.<sup>2</sup>

The antidiuretic action of various hypnotic drugs such as chloralose, antipyretics and pituitrin have been studied in animals but the results have been controversial. However, DeBodo and Prescott have shown that some barbiturates have an antidiuretic effect in animals.<sup>3</sup>

The antidiuretic effect of morphine and allied compounds in man has long been a clinical impression; but the earlier clinical studies yielded irregular results. The first controlled clinical studies on the inhi-

bition of water diuresis in man by morphine were made by Fee using himself as the subject.<sup>4</sup> Master reported his clinical impression that morphine reduced the effect of mercurial diuretics in 1941.<sup>5</sup> Recently, Ferrer and Sokaloff published their carefully controlled observations on the antidiuretic effects of morphine and demerol in congestive heart failure.<sup>1</sup> Nine patients were thoroughly studied and they found that morphine exerted an inhibitory action on mercurial diuresis in three of the cases; and in two patients, demerol also showed an antidiuretic effect. The total chloride excretion was reduced by morphine and demerol during mercurial diuresis. Finally, under certain circumstances, it was possible to demonstrate the inhibition of water diuresis in man by morphine; but the total chloride excretion during water diuresis was slightly increased by this same narcotic drug. The antidiuretic effect was noted as early as 40 minutes and as late as 75 minutes after morphine was given and persisted for a period of 2½ to 4 hours. The antidiuretic effect of demerol was noted 24 minutes after the injection and persisted 2 to 3 hours.

Methadon (Dolophine), which is a synthetic, organic compound, designated by the chemists as 6-dimethylamine-4, 4-diphenyl 3-heptanone hydrochlo-

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\* Cardiologist, Central Maine General Hospital, Lewiston, Maine.



ride, with analgesic properties, has been studied in respect to the effect this preparation has on urinary secretion. In paragraph 28 of the "Question and Answer Monograph" on Dolophine prepared by Eli Lilly and Company in 1947, it was stated that dolophine had been found to depress the formation of urine as does morphine; and in paragraph 29 it was stated that dolophine did not produce a marked fall in blood pressure when injected intravenously in animals; while in paragraph 27 it was stated that a single therapeutic dose of dolophine did not significantly reduce the respiratory rate in man.

It was this antidiuretic effect of demerol on mercurial diuresis in a patient with hypertensive heart disease and left ventricular failure which aroused the interest of the writer in a comparative study of the antidiuretic action of morphine, demerol, and methadon. The patient under treatment was a 57-year-old hypertensive who was over-weight and who had had at least one coronary occlusion with myocardial infarction in the Fall of 1945. This case was in the hospital for treatment in the Spring of 1946 and was discharged much improved in June and was instructed to continue at home with a maintenance dose of digitalis grs.iss daily and with a "zantrate" tablet (Upjohn) three times daily; and the clinical course was satisfactory during the summer and fall of 1946 on this therapy.

In January, 1947, a check-up examination revealed that the patient's only complaints were of weakness in the legs, easy fatiguability, excessive sweating, and some intermittent headaches. (The latter two symptoms were thought to be due in part, to the menopause.) The physical examination revealed a blood pressure of 220/120 and a pulse rate of 88. On palpation the apical impulse was found to be well outside the mid-clavicular line in the 5th interspace and was quite forceful. On auscultation, a systolic murmur was heard over the apex area of the heart. No diastolic murmur could be made out, and there was no clinical evidence in the form of basal rales or enlarged liver or peripheral edema to suggest cardiac decompensation. The patient's weight was 149 lbs.

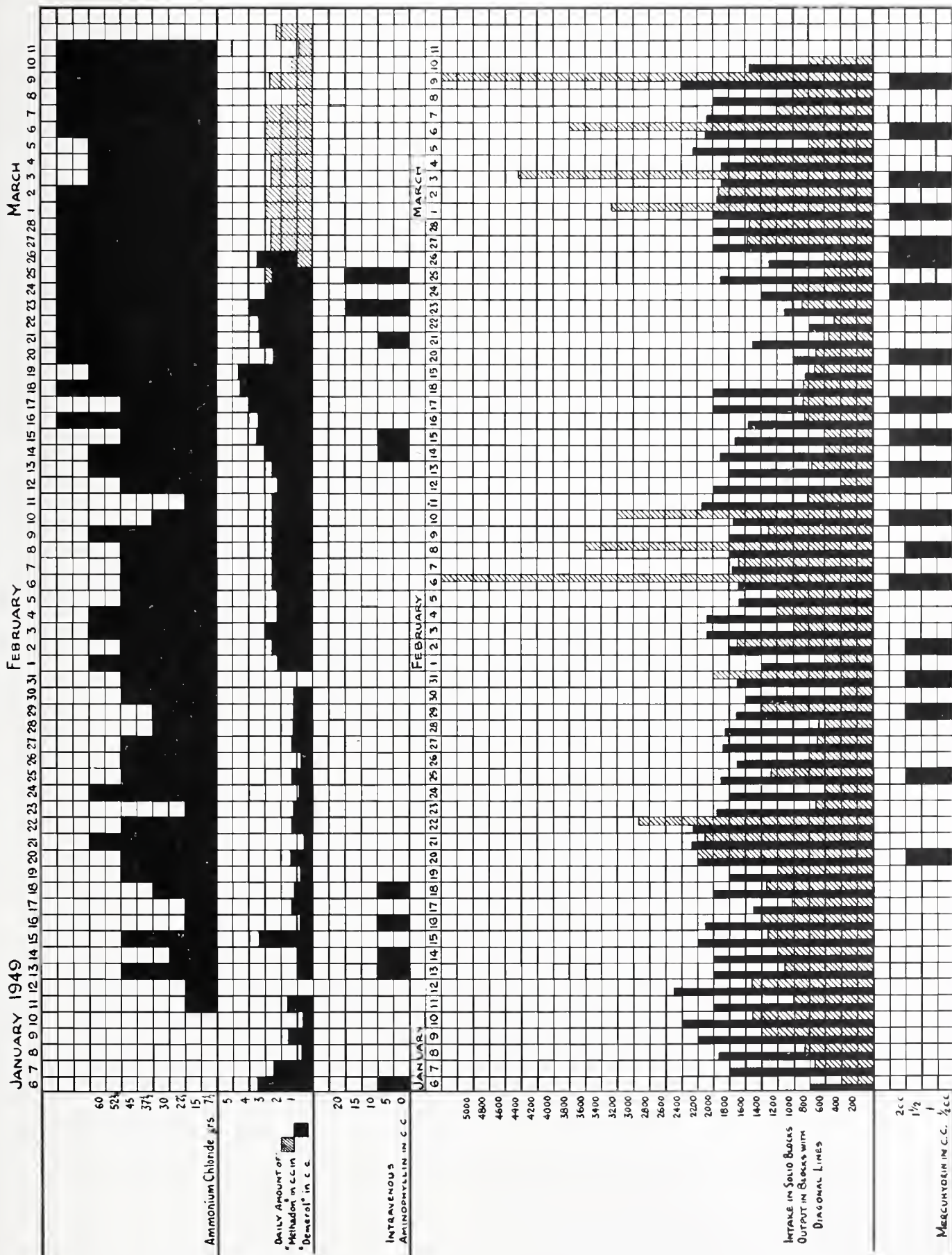
The fluoroscopic examination of the heart and lungs showed a moderate enlargement of the heart with the increase in size confined primarily to the left ventricle. The contractions of the ventricular musculature were of fair quality. No other abnormalities were noted on examination of the heart itself. Each lung was clear except for some increased density in and around the hilar region on each side. The diaphragms moved equally and well and the costophrenic and costodiaphragmatic angles were clear.

A repeat electrocardiogram showed an intraventricular block for the first time. The PR interval was 0.2 sec. In lead I, the ST segments were depressed. There was marked left axis deviation. This tracing was otherwise not particularly remarkable.

The patient's general condition remained good during the next twelve months and the only complaints were those of easy fatiguability and of dyspnea on mild exertion. A routine check-up physical examination in February, 1948, revealed a gallop rhythm with a heart rate of 110 beats per minute, rales at both lung bases, moderate enlargement of the liver, slight pitting edema of the lower legs and ankles and a blood pressure of 200/130. Injections of Mercurhydrin were given at home but the signs and symptoms of left ventricular failure did not disappear and the patient was referred to the hospital for further bedrest and treatment. With digitalization, diuretics and more complete bedrest there was a slow but satisfactory clinical improvement and the patient was finally discharged from the hospital on March 21, 1948, with instructions to continue digitalis grs. iss daily and Mannitol Hexanitrate tablets grs. ss q.i.d. and to continue on a rice diet which a cardiac consultant had recommended early in March, 1948. (It should be noted here that the gallop rhythm had disappeared, the blood pressure had dropped down to 160/110 in the right arm and 150/100 in the left arm and the pulse had decreased from 110 to 70 beats per minute prior to the start of the rice diet.) Also of interest was the fact that the intraventricular heart block noted on the electrocardiogram taken when the pulse rate was 110 beats per minute was no longer present on the electrocardiogram taken after the heart rate had slowed down to 80 beats per minute.

This patient's clinical course continued quite satisfactory on therapy with digitalis and mannitol hexanitrate and with the rice diet during the remainder of the summer and through the early fall of 1948. In October of 1948, this patient unfortunately contracted an acute respiratory infection and following this had an increase of the pulse rate once again to approximately 100 beats per minute. There was a return of the gallop rhythm and with this, there was a return of signs and symptoms of left ventricular failure. The electrocardiogram (which had improved when the pulse rate dropped down to 70, as manifest by the disappearance of the intraventricular block), again showed an intraventricular block. Bedrest was instigated and diuretics were administered at home but again failed to bring about the desired clinical improvement. Hence, on January 6, 1949, it was deemed necessary to readmit this patient to the Central Maine General Hospital. The treatment prescribed in the hospital during the months of January, February and March of 1949, and the patient's intake and output while on this therapy has been shown in graphic form on Chart I. Mercurhydrin was the chief diuretic used, but intravenous injections of Amminophylline were used on a few occasions to supplement the former diuretic.

CHART No. 1





Throughout this three-month period the basic therapy remained unchanged and consisted of complete bedrest, full digitalization, ammonium chloride, oral aminophylline, mild sedation and a diet low in sodium content. Despite this vigorous type of treatment the pulse remained rapid and the gallop rhythm persisted, but the blood pressure did drop and averaged 160/110 mm. of mercury. Injections of mercurial diuretics were given at the times indicated on the chart for the purpose of mobilizing the edema fluid and to free the lungs from congestion.

Since this patient was sensitive to morphine and to the closely related narcotic drugs derived from opium, as manifest by a generalized urticarial eruption and intense itching of the skin which signs and symptoms would persist for three to four days after each such injection, it was considered unwise to administer any of these preparations. Therefore, demerol had been used when an analgesic drug had been required, and an inspection of the chart will show that the daily requirements averaged  $1\frac{1}{2}$  to  $2\frac{1}{2}$  cc. during January and the first part of February, 1949. Injections of mercurhydrin administered on the 20th, 25th, 29th and 31st of January and on the 1st, 6th, 8th, and 10th of February were followed by a satisfactory diuresis with the 24-hour output ranging from 1250 cc. to 5400 cc. on the above occasions. However, an injection of 2 cc. of mercurial diuretic on February 13th and 15th was followed by a 24-hour urinary output of only 675 cc. and 600 cc. respectively. At first this unsatisfactory response was attributed to the fact that the amount of ammonium chloride administered for the preceding three days had obviously been quite inadequate. Hence, the dosage of this latter drug was immediately stepped up to 75 grs. a day yet a repeat injection of 2 cc. of mercurhydrin two days later on February 17th was again followed by a 24-hour urinary output of only 825 cc. From the chart it will be seen that the demerol had also been increased to  $3\frac{1}{2}$  cc. to 4 cc. on the day previous and the day of the injection respectively. Subsequent injections of 2 cc. of mercurhydrin at two to three-day intervals were not productive of any substantial diuresis and the patient's congestive failure became progressively worse despite increased daily amounts of ammonium chloride and the repeated injections of mercurhydrin. Of course, in the meantime, it had become necessary to give the patient from  $3\frac{1}{2}$  to  $4\frac{1}{2}$  cc. of demerol a day in order to keep her reasonably comfortable and to alleviate the signs and symptoms of anxiety, dyspnea and orthopnea.

The anti-diuretic effect of demerol was suspected as the cause of the failure of mercurhydrin to give a satisfactory mobilization of the body fluid. Blood chemistry tests were carried out and it was shown that all other possible contributory factors such as a depletion of sodium, a decrease in total protein, etc. could be eliminated as possible causes for the failure

of mercurial diuretics when injected to produce a satisfactory urinary output.

Therefore, it was determined to attempt a substitute for the demerol and on February 24th this drug was discontinued and the patient was given barbiturates in the form of sodium luminal and sodium Amytal prior to and immediately after the injection of mercurhydrin; but the patient was very restless and these barbiturate drugs failed to keep her quiet and it eventually was necessary in the late afternoon to again administer demerol in order to provide satisfactory sedation. Once again the diuresis produced by the injection of 2 cc. of mercurhydrin produced only a 24-hour output of 1000 cc. of urine and was adjudged unsatisfactory. Therefore, it was decided to change the patient from demerol to methadon which was accomplished on February 26-27. As will be noted, an injection of 2 cc. of mercurhydrin on February 27 was productive of a 24-hour output of 1600 cc. of urine. Thereafter, injections of 2 cc. of mercurhydrin on the 1st, 3rd, 6th and 9th of March were followed by 24-hour urinary outputs of 3200 cc., 4400 cc., 3800 cc. and 5400 cc. of urine. By March 10, the patient was completely dehydrated in so far as excess fluid was concerned and her general condition was greatly improved. As the patient's condition improved early in March, 1949, progressively smaller daily amounts of methadon were required.

As an incidental observation, it was also noted that there was an immediate disappearance of a rather marked tremor and of the mental agitation and emotional instability which had developed when the 24-hour dosage of demerol had had to be increased to  $2\frac{1}{2}$  to 3 cc.

#### DISCUSSION

The antidiuretic effect of demerol and of methadon on mercurial diuresis has been studied on a patient with hypertension and hypertensive heart disease with congestive failure; and the data has been included in graphic form on chart No. 1. During this seven-week period when this case was under study the patient was kept fully digitalized, was maintained on aminophylline, ammonium chloride and on a low sodium diet and was on complete bedrest. Except as indicated above, the dosage of all medications aside from the actual diuretics was maintained in the same daily amounts. When the data obtained was studied, it became apparent that the demerol did not exert a really serious antidiuretic effect on mercurial diuresis until the required daily therapeutic amount of the drug exceeded  $2\frac{1}{2}$  cc. (125 mgs.).

An attempt was made to leave off demerol and to administer certain barbiturates (sodium luminal and sodium amytal) on the day that a mercurial diuretic was administered, and although the 24-hour urinary output rose from 700 cc. of urine obtained after the

former narcotic drug was used to 1000 cc. when the latter hypnotic drugs were substituted, the diuretic response was still far from satisfactory. Since the patient was very restless and uncoöperative when the barbiturates were substituted for demerol on the day of the injection with mercuhydrin, it was deemed unwise to attempt additional trial periods with the barbiturates as a substitute for demerol.

The urinary output following mercurial injections and the clinical response of the patient was most gratifying immediately after methadon was substituted for demerol. A satisfactory therapeutic response in the beginning was obtained with 2½ to 3 cc. (25 to 30 mgs.) of methadon daily; but the amount of this drug required per day decreased as the patient's congestive failure was alleviated as a result of the much larger urinary output which followed each injection of mercurial diuretic.

Published observations made on well controlled series of cases indicate that morphine, demerol and certain barbiturates have a definite antidiuretic effect on mercurial diuresis in a substantial percentage of cardiac patients in congestive failure. Some of these investigators<sup>1</sup> have pointed out that a larger dose of morphine and of the other allied drugs might possibly have given an antidiuretic effect in a greater number of the patients under consideration.

In the hypertensive patient with congestive failure whose case history is summarized above, demerol in daily therapeutic doses of over 2½ cc. (125 mgs.) exerted a much greater antidiuretic effect on mercurial diuresis than did daily therapeutic doses of 2½ to 3 cc. (25 to 30 mgs.) of methadon. These observations suggest the possibility that the antidiuretic effect of demerol in therapeutic doses on mercurial diuresis in certain cardiac patients with congestive failure may be greater than is the antidiuretic effect of therapeutic doses of methadon on mercurial diuresis.

That older persons now constitute the major focus of tuberculous infection is emphasized by recent autopsy studies which show that a relatively large number of persons supposedly succumbing to diseases other than tuberculosis were found to have this disease in active form. It is recognized that the disease in older persons is frequently mild and that the symptoms may be overlooked.— *Statistical Bull.*, Metropolitan Insurance Co., Nov., 1948.

The cause of the high prevalence of tuberculosis in mental hospitals is failure to recognize or seek out cases of tuberculosis among incoming patients who

A comparison of the antidiuretic effect of therapeutic doses of demerol and of methadon on mercurial diuresis with a large group of cardiac patients with congestive failure will be required in order to determine in what percentage of instances this antidiuretic effect of demerol may be substantially greater than is that of methadon. In the meantime, when any one of these narcotic drugs like morphine is found to exert a serious antidiuretic effect on mercurial diuresis, it would seem worthwhile for clinicians to try out the various other closely related synthetic analgesic preparations like demerol and methadon in the hope that some of these other preparations in therapeutic doses will not exhibit as marked an antidiuretic effect in the particular patient under treatment.

SUMMARY

1. A case summary has been presented of a hypertensive patient with congestive heart failure in which therapeutic doses of demerol produced a marked antidiuretic effect on mercurial diuresis.
2. Therapeutic doses of methadon did not exhibit the same serious antidiuretic effect on mercurial diuresis when given to this same decompensated cardiac patient.

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then transmit the disease to other patients during residence in the hospital. The situation can be improved only by segregating and treating the tuberculous patients discovered by survey. — Waldo R. Oechsli, M. D., *Pub. Health Rep.*, Jan. 7, 1949.

The admission of tuberculosis patients to general teaching hospitals on a more liberal basis than has become the custom would do more than any other measure to improve medical education in tuberculosis. In a teaching hospital the mere presence of a tuberculous section is of educational value. — Carl Muschenheim, M. D., *Am. Rev. Tuberc.*, July, 1949.



RICKETS: A PRESENTATION OF FOUR CASES

G. WALTER ERICKSON, M. D.

Of 220 admissions to the Pediatric Service of the Central Maine General Hospital during the first three months of 1949, four infants, ranging from 6-10 months of age, were discovered to have rickets. These patients are presented to demonstrate that rickets is not a "disease of the past," and to stress the importance of an adequate supply of Vitamin D in early infancy.

CASE REPORTS

Case 1. N. L., a 6-months old male infant had loose green bowel movements for 6 days prior to admission. He weighed 6 lbs. at birth; full-term, normal delivery in the hospital. He was fed a whole milk formula from birth. No other foods or vitamins were ever given. Physical examination revealed craniotabes of the occipital area of the skull and a mild pharyngitis. X-rays of the long bones showed moderately advanced rachitic changes. Laboratory studies were: calcium 10 mgm. % and phosphorus 2.9 mgm. %. The diarrhea subsided on restriction of diet. A multiple vitamin preparation was given so that the infant received 3600U of Vitamin D daily and he was discharged in 6 days.

Case 2. P. D., a 7-months old female infant was being held by her brother when he fell with the infant on top of him. Despite the minimal trauma, the infant did not move her right leg thereafter. She was born at 7½ months weighing 4 lbs. 1 oz. A whole milk formula with no other foods or vitamins had been given since birth. Physical examination revealed a pale infant with swelling and tenderness of the right thigh. There was beading of the ribs. X-rays showed a greenstick fracture of the middle third of the right femur with changes in the metaphyseal end of the

femur and tibia characteristic of rickets. Laboratory studies were: RBC 2,180,000 with 8 gms. Hb. Calcium 11.4 mgm. % and phosphorus 2 mgm. %. The right thigh was placed in a cast. Two blood transfusions were given after blood studies and the infant was discharged on Oleum percomorphum and ferrous sulfate.

Case 3. L. G., a 9-months old female infant was admitted with cough and fever of two days' duration. She had received a whole milk formula since birth with no other foods, cod liver oil or orange juice. Physical examination revealed a bronchopneumonia and a rachitic rosary. X-rays showed bronchopneumonia with changes in the long bones interpreted as being caused by rickets and scurvy. Laboratory studies were: calcium 9 mgm. % and phosphorus 3 mgm. %. Penicillin was given together with fresh orange juice, multiple vitamins and a full infant diet. The pneumonia cleared rapidly and the infant was discharged in 10 days on a multiple vitamin preparation.

Case 4. P. V., a 10-months old male infant was admitted with a 6-day history of cough and fever. Birth weight was 8½ lbs., full term, normal delivery. The infant had received only whole milk since birth. A small amount of cereal had been taken for the past two months. Physical examination revealed a pale infant with bronchopneumonia and beading of the ribs. X-rays showed rachitic changes in the long bones. Laboratory studies were: RBC 2,860,000 with 6.3 gms. Hb. Calcium 8.9 mgm. % and phosphorus 2.4 mgm. %. A spinous process bone marrow specimen showed a hypoplastic marrow. The infant responded to penicillin, sulfadiazine and transfusions and was discharged on multiple vitamin drops and elixir ferrous sulfate.

SUMMARY OF DATA IN CASES OF RICKETS

Case No.	Hospital No.	Age	Sex	Month Seen	Vit. D	Diet	Laboratory Values			Reason for Admission	Clinical Signs
							Ca	P	Ca X P		
1	131340	6 Mo.	M	Mar.	None	Milk	10	2.9	29	Diarrhea	Craniotabes
2	130442	7 Mo.	F	Jan.	None	Milk Cereal	11.4	2	22.8	Fracture of femur Anemia	Beading of ribs
3	130995	9 Mo.	F	Feb.	None	Milk	9	3	27	Pneumonia Scurvy	Rachitic rosary
4	131129	10 Mo.	M	Mar.	None	Milk Cereal	8.9	2.4	21.4	Pneumonia Anemia	Rachitic rosary

*Diet:*

All four infants were fed a whole milk formula from birth until their admission to the hospital. Two of the infants received a small amount of cereal as well. No infant received any vitamin preparation.

*Laboratory Studies:*

The serum inorganic calcium ranged from 8.9 to

11.4 mgm. %. These values are within the normal limits for infants as determined in the laboratories of this hospital. Serum phosphorus varied from 2-3 mgm. %. These values are much below the normal level of 4.5-6.5 mgm. %. The calcium-phosphorus product ranged from 20.6-29 mgm. %. Any level below 40 is generally considered diagnostic of rickets.



FIGURE NO. 1

R



FIGURE NO. 1

L

Figures 1 and 2 show the typical bony changes in the wrists, knees and ankles associated with moderately advanced rickets. Note particularly the irregularity at the metaphyseal ends of the femora and tibiae, with apparent increase in the distance between the metaphyses and the epiphyses.



FIGURE NO. 2





R

FIGURE NO. 3



FIGURE NO. 3

L



FIGURE NO. 4

#### *Clinical Signs:*

The youngest patient (6 months) exhibited cranio-tabes and extreme irritability. Any portion of the occipital area of the skull could be easily indented by finger-tip pressure. The 7-months old infant sustained a greenstick fracture of the femur secondary to minor trauma. She showed a beading of the ribs.

Figures 3 and 4 show the same joints six weeks after anti-rachitic therapy was started. The metaphyses have been restored to normal contour and bone density, and the "gaps" between metaphyses and epiphyses have been bridged by the deposition of new bone. Only a transverse line 4 mm. proximal to the zone of provisional calcification in the femur remains as evidence of the previous disease.

The 9 and 10-months old infants exhibited only a pronounced rachitic rosary.

None of the infants could do much more than lie on their backs on admission. None could roll over or sit unaided. A pronounced irritability was manifested by all. Indeed, inability to stop the infant from

crying was the reason for bringing the 6-months old patient to the hospital.

*Complications or Associated Conditions:*

Two of the infants had a severe bronchopneumonia. One infant had diarrhea and another had scurvy. Two infants showed a severe hypochromic anemia. Bone marrow aspirations from the spinous processes showed no evidence of megaloblastic anemia. Diet, transfusions and iron were used to correct the anemia.

*Treatment:*

A cod liver oil concentrate or a water-soluble multiple vitamin preparation was used in all cases. Ten drops were given t. i. d. so as to supply a total of 5400 units of Vitamin D per day. This is an amount considered to be sufficient to cure rickets.

After 1-2 months of this therapy, a maintenance dose of 10 drops of the concentrate was given each day.

All the infants were placed on a full diet containing fruits, vegetables, cereal and orange juice as soon as their acute illnesses permitted. The infant with scurvy was given 4 oz. of fresh orange juice each day.

*Follow-Up:*

All the infants were re-examined 6-12 weeks after rickets was discovered and treatment begun. The serum phosphorus rose from an average of 2.5 mgm. % to 3.8 mgm. %. The calcium rose from 9.8 mgm. % to 11.3 mgm. %.

X-ray films showed normal ossification of the epiphyseal plates of the long bones. The only evidence of the previous rachitic condition was the presence of transverse lines of increased density at the lower ends of the metaphyses.

*Discussion:*

All cases occurred in January, February or March. These months are the period of least ultraviolet light

exposure. All infants had passed through their most susceptible period (4-6 months of age) during the winter months.

Whole milk or a whole milk formula was the only food given to any infant except for very small amounts of cereal given in two cases. It was a common feeling of the mothers that whole milk alone was the only food necessary during the first year of life. No infant was breast-fed for more than a few weeks. Some mothers knew that "vitamins" should be given to their babies but said that the expense was too great.

Rickets might have been prevented by the use of an irradiated whole or evaporated milk. Since evaporated milk is so universally supplied with 400 units of Vitamin D per reconstituted quart and is much less expensive, it would seem best to advise its use routinely in infants if mothers do not desire breast-feeding.

SUMMARY

Four cases of rickets in infants are presented. The diet consisted of whole milk only even to 10 months of age. Laboratory and X-ray studies confirmed the clinical impression of rickets. A cod liver oil or multiple vitamin concentrate produced adequate response within 6-12 weeks in all cases.

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Programs for the control of tuberculosis among college students are now being conducted at several hundred institutions. The incidence of tuberculous infection among entering students has shown a very significant decrease during the past fifteen years. In most sections of the United States less than 30 per cent of undergraduate students react to tuberculin and in many areas, less than 20 per cent.—H. D. Lees, M. D., *Diseases of the Chest*, May, 1949.

Tuberculosis patients discharged from sanatoria face the future with various life expectancies. Their subsequent mortality is in part influenced, as in the

general population, by sex, race and age. The fact that they have had tuberculosis and have been treated for it may also affect their length of life. For one thing, tuberculosis is a disease which places great stress upon the family involved. It sometimes reduces the level of living to such a point that the mortality risk of the patient returning to the family group may be increased, since higher mortality rates are associated with lower family incomes. Premature efforts on the part of the patient to return to gainful employment in order to restore the standard of living may result in relapse and death.—Agnes W. Brewster, A. B., and Ralph Carr Fletcher, M. A., *Pub. Health Rep.*, June 3, 1949.



## INFANTILE CORTICAL HYPEROSTOSIS

### Case Report

DEREK WILLIAMS, M. D.\* and HENRY C. THACHER, M. D.\*

In 1945, Caffey<sup>2</sup> and Smyth<sup>4</sup> independently described a syndrome appearing in infants and small children, characterized by irritability and fever, and shortly followed by brawny edema usually of the face, but also involving other parts of the body. Roentgen examination of these infants revealed subperiosteal cortical hyperostosis of the mandible and/or ribs, clavicle, scapula, and long bones. Since then several other cases have been reported.\*\*

The onset of symptoms occurs usually within the first five months of life; fever is low grade, and anemia is present initially or follows subsequently in the majority. Leucocytosis has been observed in a high percent of the group and elevation of the sedimentation rate is frequently found.<sup>7</sup> There is no alteration in blood chemistry in so far as phosphorus and calcium are concerned. An elevation of the alkaline serum phosphatase has been observed.<sup>4,9</sup> Attempts to determine the etiology of the syndrome by incriminating bacteria or viruses have failed.<sup>7</sup> Conditions which must be excluded are trauma, scurvy, rickets, syphilis, osteomyelitis, and neoplastic disease, all of which may be associated with cortical thickening of the bone.<sup>3</sup> Parotitis, rheumatoid arthritis, and leukemia might be included in the differential diagnosis. The prognosis is good; the course may be protracted, but the disease is benign and self-limited.

#### *Case History—First Admission 6/25/49:*

C. B., the patient, a male infant, was born May 1, 1949. The period of gestation was not remarkable; the mother's diet appeared adequate, and she was well throughout the pregnancy. Delivery was spontaneous at term; birth weight 4.1 Kg. Examination of the baby on the fourth day following birth revealed no abnormality. Evaporated milk and "Karo" were offered and taken well with progressive gain in weight. Orange juice was started during the second week, but was poorly tolerated so the vitamin intake was inadequate until the seventh week. (No cod liver oil was given.) The mother noticed that the right arm and hand were smaller than the left, and that the baby did not move this extremity as much as the left. The infant was described as irritable from birth. The baby rolled over at 7½ weeks and his development was not retarded.

At two months of age the baby was admitted to the

hospital because of swelling of the shoulder and inability to move the right shoulder and arm. While bathing the infant two days prior to entry the swelling over the right scapula was noticed and the child cried if the shoulder was touched. He had not eaten well for three days prior to entry and "felt warm for several days." The night prior to entry the temperature was 99.4° F. (rectal).

On admission the infant weighed 5.4 Kg., the temperature was 99° F. (rectal). When handled he appeared distressed and there was soft tissue swelling overlying the right scapula, but no hyperemia. The muscular development of the right upper extremity was diminished in comparison to the left. The right arm was freely movable but there was pain on motion. No other abnormalities were observed.

#### *Laboratory Findings:*

The Hinton and Kahn tests were negative. A tuberculin test (1:1000) was negative. The sedimentation rate was 130 mm. read in one hour (Westergren). Urinalysis showed essentially no abnormalities. One blood culture showed no growth. Predominant organisms in the throat culture were pneumococci and a slightly hemolytic staphylococcus aureus.

#### *Blood Chemistry:*

Calcium 11.5 mgm.%, Phosphorus 3.6 mgm.%, alkaline phosphatase 6 Bodansky units.

#### *Blood Morphology:*

6/25/49	WBC 14,700	Polys 37,	Lymphs 49,
		Stabs 8,	Monos 5, Eos 1.
7/5/49	WBC 12,800	Polys 70,	Lymphs 19,
		Stabs 5,	Monos 5, Eos 1.
6/25/49	RBC 3,680,000	HB 66%.	
7/5/49	RBC 2,920,000	HB 52%.	

#### *X-ray Findings:*

The examination of the right shoulder and survey films taken 6/25/49, revealed an increased density of the right scapula; the outlines of the scapula were blurred and there was bony extension beyond the normal scapula margin. Considerable soft tissue swelling was present around the right shoulder girdle. Examination of the long bones showed no significant variation from the normal. No other part of the skeleton appeared to be involved.

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\*\* We have been able to find 23 cases in the literature.



Fig. 1. X-ray of the chest showing hyperostosis involving right scapula.

#### *Clinical Course:*

The child remained in the hospital sixteen days and during that time ran a low grade intermittent fever, the temperature varying between 98° F. and 101.6° F. (rectally). The feedings were taken well. V-penta was added to his diet, and he gained weight. A biopsy was done on the first admission. At operation the muscle tissue overlying the scapula appeared hyperemic, edematous, and friable. The biopsy report for our Department of Pathology confirmed by Dr. MacMahon follows: "Biopsy of the scapula shows no evidence of malignancy. There are nests of well formed and poorly formed bone spicules. The stroma is of the usual marrow type and elsewhere shows fibrosis and a mesenchymal type of reaction. The muscle and other tissue show focal and diffuse infiltration with lymphocytes. Picture is consistent with an inflammatory process possibly indicating repair of injury."

The patient was treated with penicillin 50,000 units I. M. every three hours for nine days with no apparent amelioration of symptoms. 120 cc. of whole blood was given 7/7/49.

#### *Second Admission—7/21/49:*

Following discharge the mother stated that the baby seemed to have difficulty taking the bottle, continued to be irritable, and felt hot. She also observed that the left side of the child's face appeared swollen.

On examination the temperature was 100.4° F.

(rectal) and the pulse 100. The baby appeared well developed and nourished. He looked anemic. There was asymmetry of the face, the left side appearing larger than the right, and on palpation brawny edema overlying the mandible on the left was found.

#### *Laboratory Findings:*

Bone marrow studies were not remarkable. Sedimentation rate continued elevated — 117 mm. in one hour (Westergren).

Urinalysis showed a trace of albumin in one specimen but was otherwise not significant.

A blood culture was negative. The tuberculin test (1:1000) was repeated and was negative.

#### *Blood Morphology:*

7/11/49 RBC 4,700,000 HB 88%.  
WBC 14,000 Polys 41, Lymphs 49, Eos 2, Stabs 7, Monos 1.  
7/28/49 Bleeding Time 3 min. 30 sec.  
Clotting Time 4 min. 15 sec.  
Platelets 380,000.

#### *X-ray Findings:*

Roentgen examination of the right scapula, skull, and mandible taken at this time revealed an increase in the right scapula to double its size; it appeared densely sclerotic and irregular. There was evident subperiosteal calcification of 2-3 mm. around the lower border of the whole mandible. There appeared to be some irregular overgrowth of the ramus on the left.

#### *Clinical Course:*

The patient was febrile, the temperature ranging between 98° and 100.4°. Penicillin was administered for five days again without any beneficial effect. The baby gained six ounces during the two weeks in the hospital.

#### *Progress Report:*

The patient has been followed at regular intervals. There has been a gradual improvement in his condition except for anemia which persists. His nutritional state remains satisfactory and his development has proceeded along normal lines. Soft tissue swelling of the face is still present and X-ray examination has shown some increase in thickness in the lower border of the mandible on the left, and further increase in the size of the right scapula.

#### SUMMARY

A case of cortical hyperostosis is reported. Characteristic symptoms appeared at two months. Low grade fever, anemia, leucocytosis, and elevation of the sedimentation rate were observed. A biopsy showed lymphocytic infiltration in the muscle and the appear-

*Continued on page 290*



## ISOPROPYL ALCOHOL POISONING WITH ACUTE RENAL INSUFFICIENCY

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Perusal of available literature reveals little information concerning the toxicity of isopropyl alcohol for man. This is somewhat surprising in view of the fact that this alcohol has appeared commercially in recent years and is available to the general public for use as "rubbing alcohol." What little is known about its toxicity when taken by mouth has been summarized by von Oettingen:<sup>1</sup>

"Dizziness, muscular and nervous disturbances have been reported; also bradycardia and lowering of the blood pressure. Ingested isopropyl alcohol becomes concentrated in certain organs, particularly in the brain, heart muscle, and kidneys. Pathologically, moderate reversible fatty infiltration may be found in these organs. Large doses in animals cause ataxia and narcosis; paralysis and dyspnea precede death."

Morris and Lightbody<sup>2</sup> believe that on account of its slow elimination, isopropyl alcohol may have cumulative effects, which may be due either to the alcohol itself or to its oxidation product, acetone.

A case of probable ingestion of one pint of isopropyl alcohol with recovery was recently observed in this hospital. The severe reaction which occurred in this case focused attention on the little-known toxicity of this alcohol and prompted this brief review of the literature. Of equal interest was the development of acute renal insufficiency in this patient, calling attention to the possibility that the now familiar but ill-understood syndrome of "lower nephron nephrosis" had resulted as one of the main toxic effects. The following is a brief abstract of this case.

### CASE REPORT

A 47-year-old general laborer with a known record of chronic alcoholism was admitted to the hospital June 6, 1948, in an unconscious condition. Some nine hours earlier, when booked by the local police, he was unconscious and a nearly empty pint bottle of rubbing alcohol (isopropyl) was found on his person. He had slept in his cell during the night with noisy respirations until one hour before admission when his breathing became stertorous and it was noted that brownish vomitus having a heavy odor of isopropyl alcohol was issuing from both nose and mouth. On admission there was coma with lack of response to stimulation. The rectal temperature was 96°F., the pulse 90 and regular though of poor quality, respirations 30 and gurgling due to inhaled vomitus, and the blood pressure 90/68. Brownish, suggestively "coffee-ground" fluid having the peculiar odor of iso-

propyl alcohol was evident in both nostrils and mouth. The skin was cool and moist and extremities clammy and cyanotic. There were no signs of trauma. Pupillary reaction to light was sluggish but present bilaterally. There was no nuchal rigidity. Loud gurgling respiratory noises were present throughout the chest but resonance was present throughout. Heart sounds were somewhat subdued and difficult to hear because of the audible respirations. No murmur could be heard. The liver, spleen, kidneys were not enlarged or tender and no abdominal masses or spasm were present. There was no peripheral edema. Extremities were not remarkable with exception of absence of all deep tendon reflexes.

Following gastric intubation with lavage, administration of parenteral fluids, elevation of the foot of the bed and application of heat, there was apparent slow response with return to clouded consciousness some nine hours later. At this time his blood pressure was 100/60, pulse 88 and respirations 28. Material aspirated from the stomach gave a strong guiac test. His subsequent management consisted mainly of fluids as tolerated, vitamins, iron and prophylactic penicillin.

The red cell count was 4,800,000; the hemoglobin 14.3 gms. (92%); the leukocyte count 23,800 with 89 polymorphonuclear neutrophils, 16 of the latter being stab forms; the NPN 37 mg.%; the serology negative; and the total proteins 7.1 gms. The first urine, obtainable 4 days after admission, was acid, dark yellow, cloudy, of specific gravity 1.014, and contained 4 plus albumin; no sugar or acetone were present and the sediment was not remarkable.

His course in the hospital was one of gradual improvement. No urine was passed during the first three hospital days with exception of an initial amount present in his bladder and involuntarily voided in bed shortly after admission. Beginning on the fourth day, small amounts of urine were voided daily until the ninth day when diuresis became marked. There was considerable nausea and vomiting during the first three days, along with passage of semi-liquid black stools. Both vomitus and stools gave a strong guiac test. He complained bitterly of epigastric pain for several days, unrelieved by food, milk or alkalies but this gradually subsided. On the fourth day, he was noted to be slightly edematous with mild pitting edema of the sacrum, puffiness of the face and eyes, and a palpable liver edge. There was no evidence of congestive failure. This edema persisted for several days, gradually disappearing after diuresis became marked. Because of the oliguria, edema, and subse-

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his apparent well-being and improvement in the face of such renal involvement. Anemia became noticeable shortly after admission, presumably on the basis of intestinal bleeding.

HAROLD SAWYER      CLINICAL CHART      ACUTE RENAL INSUFFICIENCY      FIG. 1



This would, therefore, appear to be an instance of toxicity of isopropyl alcohol for man. The evident toxic effect of this substance appeared to be mainly upon brain (coma, narcosis), vascular system (weak

Although this man was a known alcoholic of some years' standing, the instances of alcoholism had apparently been episodic and spaced with frequent prolonged periods of abstinence. Clinically, he evidenced no features suggestive of hepatic cirrhosis. His bromsulphthalein excretion was normal. His hepatomegaly became manifest at the time of renal shutdown and



slowly subsided following disappearance of edema and diuresis. At no time was there jaundice. Because of these features and particularly the enlargement of the liver in the face of peripheral edema, the status of any direct toxic effect of the isopropyl alcohol upon the liver is uncertain.

This suggested effect of isopropyl alcohol upon liver and kidneys brought to mind the similar, though more pronounced, toxic effect of carbon tetrachloride upon these organs. With the latter, the so-called "hepato-renal" syndrome becomes frequently manifest with acute renal insufficiency a prominent feature. In this instance there is supposed to be a direct toxic effect upon both organs.

The development of acute renal insufficiency in this patient was an unexpected complication and could be explained on the basis of either gastro-intestinal bleeding and shock, or direct toxic effect of the alcohol upon the kidneys, or a combination of both factors. Hemorrhage and shock are known prodromal causes of this type of acute renal insufficiency. The extent of gastro-intestinal bleeding was reflected in the finding of blood in both vomitus and stool during the first 4 days, the presence of shock at the time of admission, and the subsequent drop in the hemoglobin from 14.3 grams to 7.6 grams. The cause and site of the bleeding was not ascertained but is believed to have been due to gastritis. There was no evidence for bleeding tendency, cirrhosis or ulcer, and a later radiologic study of the upper intestinal tract was unrevealing.

A frequent observation in instances of gastro-intestinal bleeding has been the finding of coexistent nitrogen retention.<sup>3</sup> Although the mechanism by which this occurs is still obscure, it is a transient effect, is not associated with renal pathology and is believed to result from absorption of decomposition products of the blood from the intestinal tract. Since, however, hemorrhage is commonly associated with hypotension and shock, it would seem possible, as exemplified in this case, that a renal factor comes into play and, as such, serves as a more rational explanation of this finding.

This patient developed anuria for 3 days, then

oliguria, edema, and nitrogen retention with delayed diuresis. As such, his course was notably similar to reported cases of acute renal failure following trans-urethral prostatectomy.<sup>4</sup> One interesting feature of his hospital course, beginning in the second week, was his apparent well-being in the face of evident severe renal damage. He was asymptomatic and ambulatory with an NPN of over 200 mg. %.

The syndrome of acute renal insufficiency of the type apparently occurring in this patient has been given various designations such as "renal anoxia syndrome," "hemoglobinuric nephrosis" and "lower nephron nephrosis". The latter has seemingly come to be the more common and proper term. According to present knowledge, the predominating mechanism in its production are tissue destruction and shock. Since both of these factors were present in the case herein presented, the subsequent development of renal damage is readily explainable. It is felt therefore, that its development in this case adds one more cause, namely isopropyl alcohol poisoning, to the long list of diversified disease states which may produce this syndrome of renal damage.

#### CONCLUSIONS

1. A case of isopropyl alcohol ingestion with poisoning in man is described.
2. The main toxic effects of isopropyl alcohol appeared to be upon brain, intestinal tract, vascular system, liver and kidneys.
3. The development of acute renal insufficiency ("lower nephron nephrosis") as a complication of isopropyl alcohol poisoning is described.

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#### *Infantile Cortical Hyperostosis—Continued from page 287*

ance of the bone was consistent with the picture of an inflammatory process. This is another case which falls into the syndrome described by Caffey and Smyth.

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## SLIPPED CAPITAL FEMORAL EPIPHYSIS

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Slipping of the upper femoral epiphysis is most often observed in children between 10 and 17 years of age. This condition is often referred to also as adolescent epiphyseal coxa vara, epiphyseolysis capitis femoris, or epiphyseal fracture. It is observed that males are affected more often than females. Slipping of the upper femoral epiphysis very often occurs in the fat children with underdeveloped sexual characteristics referred to as Frohlich's Syndrome and in the very tall children. It has not been established whether the condition is caused primarily by an endocrine problem or by vascular disturbances or by trauma as such.

This condition is unilateral and quite often bilateral. The head of the femur becomes displaced downward and backwards on the neck, the whole lower limb externally rotates and in extreme cases, the external rotation deformity may come to 90 degrees.<sup>1</sup> One of the first symptoms may be pain in that knee and later one notices limitation of the hip movements on the affected side with slight shortening of the limb, very often suggesting acute arthritis or tuberculous infection, but there is no flexion deformity and there is extreme external rotation deformity. The patient may have an intermittent limp and the pain may disappear for awhile only to return again. There is limitation of internal rotation movement of the hip. One can demonstrate in these cases that internal rotation is less than the normal 30 to 40 degrees. The range of external rotation may be somewhat greater than the normal 50 to 60 degrees. It is usually impossible to flex the hip and knees so that the knee touches the front of the chest. On the other hand, on full flexion of the hip the knee lies at the side of the chest wall near the axillary line and the limb is externally rotated. Antero-posterior X-rays along with lateral views should be taken of the abnormal hip and compared with similar X-rays on the normal side. One of the first signs on lateral view is that the cup-shaped epiphysis is no longer fitting accurately on the curved surface of the neck of the femur. The depth of the epiphysis measured from the epiphyseal line to the articular surface is slightly greater than in the lateral view of the normal hip.

In the antero-posterior view the depth of the epiphysis seems less than in the normal hip, and downward displacement is shown in this view if a line is drawn along the upper margin of the femoral neck and projected beyond the epiphysis. Normally this line cuts off a fairly large fragment of the upper part of the epiphysis and if the epiphysis lies below it, no

portion of it is cut off due to the displacement of the epiphysis downward and backwards.

One usually classifies epiphyseal coxa vara into various stages: the pre-slipping stage where we find a widening of the epiphyseal line with irregularity of bone at the end of the neck of the femur. The patient complains of pain in his knee and hip region and there is a limp associated with some limitation of internal rotation but apparent presence of external rotation of the hip involved.

The stage of minimal slipping is where a slip of the epiphysis backwards and downwards from the femoral neck does not amount to any more than one centimeter.<sup>2</sup> Here the usual symptoms are present. X-rays in the antero-posterior view revealed that if a line is drawn along the upper margin of the femoral neck and projected beyond the epiphysis it will not cut off a fragment of the upper part of the epiphysis as it would when projected over a normal corresponding hip in a patient of the same age group. Also the depth of the epiphysis shown in this antero-posterior view is less than in the normal hip. On lateral X-ray views, the depth of the epiphysis measured from the epiphyseal line to the articular surface is slightly greater than in the lateral view of a normal hip. In the lateral view also we see that the cup-shaped epiphysis is no longer fitting accurately on the curved surface of the metaphysis and that part of the latter is uncovered in front and a beak of the epiphysis projects behind it.

When the epiphysis has slipped more than one centimeter it goes into the classification of marked slipped epiphysis and this is classified as a stage of acute slipping or a stage of chronic slipping depending on when the patient is seen, following the onset of injury and following the development of symptoms. The duration of time since the condition developed will modify and alter the form of treatment to be undertaken in that particular case. The next stage we refer to as the late stage which includes patients who are seen too late for any treatment in reference to the epiphyseal line which has already closed. Many of these patients will appear in adult life, when owing to stresses and strains on the mal-adjusted joint surfaces and sockets, with symptoms which demand some sort of treatment.

*Treatment in the Pre-slipping Stage:* Some claim that there is a stage before any actual slipping is present where one can recognize it by means of antero-posterior X-rays and comparing them with the corre-



sponding normal side. Here we see a slight widening of the epiphyseal line and slight displacement on lateral X-ray views. Protection against further slipping here can be given by avoiding weight bearing on the affected hip with the use of crutches and a high soled shoe worn on the foot of the unaffected leg. One has to observe this patient until there is complete union between the epiphysis and the neck so that no weight bearing is allowed until the epiphyseal line is seen to be of the same consistency as the bone in the other adjoining parts. It seems safer in the opinion of many men that once a condition of epiphyseal separation is observed, lateral nailing using the three-flanged nail such as the Smith-Petersen nail will retain the fragments and prevent them from slipping any more. The nail is kept in until the epiphyseal line is obliterated. Many have tried using plaster of paris Spica casts but it has been found that even though the patient is immobilized either in traction or by means of plaster of paris Spica casts, further slipping does take place since the head and neck are not held together firmly by some tangible internal fixation. It is also wise to watch the contralateral hip for slipping which does take place in a certain number of cases. We very often refer to this pre-slipping stage as a minimal slipping so long as the slipping of the epiphysis backwards and downwards does not amount to more than one centimeter. These cases should be nailed in situ without arthrotomy. The nail is introduced into the lateral cortex of the subtrochanteric region of the femur and driven through the neck across the epiphyseal plate and into the head without any attempt at altering the existing relationship of the femoral head and neck. The hip is immobilized post-operatively by Buck's extension until the sutures are removed. The patient is then allowed to be up and about on crutches or with a brace until motion in the involved hip joint is free and painless. Whether one uses drilling of the epiphysis, plaster of paris immobilization, non-weight bearing splints on the affected limb with a high sole on the shoe of the normal extremity, or bone grafts through the epiphyseal plate or the nailing in situ, the patient is not cured until the epiphysis is closed and consists of bone comparable to the bone present in the epiphysis and in the neck. In using the three-flanged nail, it can be removed when the epiphysis is closed in the same fashion as a nail is removed after a nailing of an intracapsular fracture of the neck of the femur.

*Stage of Acute Slipping:* Here the epiphysis has become nearly or totally separated from the femoral neck due to some precipitating acute trauma. Here, some men attempt reduction by means of manipulation and the application of a plaster of paris Spica. This is done under general anesthesia. If reduction is not accomplished by manipulation in a gentle fashion, forceful manipulation should not be used. In many cases of acute slipping if seen immediately after the epiphyseal separation, it is possible by means of

traction and elevation of the foot of the bed using both traction and counter-traction, to replace the separated epiphysis so that nailing in situ through a lateral incision is possible.

If manipulation and traction fail, then an open reduction of the slipped epiphysis becomes necessary. The approach can be through a Smith-Petersen type of incision and the epiphysis is replaced over the end of the femoral neck and a nail is inserted. This of course indicates an arthrotomy and a replacement of the slipped epiphysis.

Post-operative treatment in these cases consists of suspension in traction for two or three weeks. The patient is later allowed to get up and around with a non-weight bearing splint on the involved extremity and a high soled shoe on the unaffected side. The brace is worn until X-ray examination discloses the obliteration of the epiphyseal line and the restoration of the epiphysis with bone comparable to the adjacent bone of the pelvis and the femur.

*Stage of Chronic Slipping:* This condition can not be treated by manipulation or traction since the epiphysis has slipped gradually and it has been the experience of Ghormley<sup>3</sup> that the epiphysis is firmly attached to the neck and it is necessary to perform an open operation. Many men advocate an osteotomy through the epiphyseal plate and the replacement of the epiphysis onto the neck and fixation of the epiphysis of the head to the neck by lateral nailing. Some men advocate excision of the epiphyseal plate and then nailing. Others advocate a cuneiform osteotomy of the neck of the femur just distal to the epiphyseal line with correction of deformity, and the use of internal fixations such as a three-flanged nail the same as is used for internal fixations of fractures of the femoral neck.

The post-operative treatment here is similar to that given in the acute slipping. Where a cuneiform osteotomy is done, a plaster of paris Spica or a nailing is used until the bone is healed similar to that treatment given for a fracture of the femoral neck.

*Treatment of the Late Stages of Epiphyseal Slipping:* Patients are very often seen with slipped epiphyses that have gone too far for any conservative treatment. The patients usually complain of pain on activity and are not willing to go through life with crutches and discomfort.

In these cases we can offer them an osteotomy such as the Schanz osteotomy or a subtrochanteric type.

Many of these cases have extreme pain. An arthrodesis would be the best choice in these late stages that usually happen in young adults with neglected treatment following epiphyseal separation or where treatment was not adequate for the slipped epiphysis.

Another procedure is the acetabuloplasty as recommended by Smith-Petersen.<sup>3</sup>

A final type of treatment for this latter group of cases, is an arthroplasty using the vitallium cup as described by Smith-Petersen.<sup>3</sup>

*Case 1.*—Male patient, R. P., age 15, admitted to the Central Maine General Hospital on September 15, 1947, with a complaint of pain in his left foot and right hip regions.

*Present Illness:* This 15-year-old white male complained of pain in the dorsum and planter surface of his left foot for about a year. The pain has been constant but not severe. This has increased on standing and after work but is relieved when the pressure is taken off.

More severe pain has occurred in the boy's right hip during the past two months. This pain has been dull in character and appeared when he was sitting and immediately upon arising. The pain disappeared after the boy had been up on his feet for a short while. There is no history of trauma or recent infection. No history of tuberculosis in the family. A review of the system is non-contributory.

*Physical Examination:* This patient is an adolescent white male, well developed and well nourished and appears to have a Frohlich type of build. Skin is fair and delicate. Patient is somewhat on the chubby side with a moderate degree of prominence of both breasts. Fat pads are present around both hips. The remainder of the physical examination is not remarkable.

*X-ray Examination:* On September 17, 1947 — Examination of the pelvis shows bilateral epiphyseolysis. Laboratory findings: White blood count 9,100; hemoglobin 93%; urinalysis negative; serology negative.

On September 19, 1947—The right hip was nailed with a Smith-Petersen type of nail which was inserted through a longitudinal incision over the region of the greater trochanter through the neck and into the head. Post-operative X-rays revealed that the nail was in good position.

Since the patient lived out of town he was kept in the hospital longer than usually and he was discharged on October 22, 1947, and asked to return if any acute symptoms appeared in the left hip region, or if no symptoms were present in either hip, to wait until two or three months had passed and then return for nailing of the other hip. The main reason for this delay between nailing of both hips and also for the long duration of hospital stay for this patient, was that he had developed a phlebitis post-operatively of the un-operated left lower extremity.

This patient who was 16 years old at this time, was readmitted to the Central Maine General Hospital on May 2, 1948, for nailing of his slipped femoral epiphysis of the left hip.

The admission note is as follows: This 16-year-old white male enters the hospital with a chief complaint of pain in his left foot. He was well until June of 1947 at which time he began to notice pain in his left foot and right hip. Pain was dull and aching in character and usually came on after walking all day. The pain continued for three months and he came to the Central Maine General Hospital in September, 1947, and had his right hip nailed. After the operation he had developed a phlebitis of the left lower extremity from which he recovered. Following his discharge from the hospital he did well and the pain in his right hip had subsided but he still had pain in his left hip region. The patient's present weight is 228 pounds and he has been gaining weight steadily. Health has been good since discharge.

*Physical Examination:* A well-developed obese boy complaining of pain in his left hip region. Patient has a feminine type of voice. Physical examination is essentially negative except that the patient is a Frohlich type and quite obese. There is a limp on the left lower extremity and the left lower extremity is held somewhat in external rotation with limitation of internal rotation motions. The blood, urine, serology were normal. X-rays taken on May 3, 1948, revealed that the right hip shows no gross changes in the status of the capital femoral epiphysis. There is no marked absorption around the nail. The epiphyseal line is indistinct and it is reasonable to believe that some union has taken place. Definite slipping of the left capital femoral epiphysis is demonstrated as on the previous study.

On May 7, 1948—The left hip was nailed with a Smith-Petersen nail extending into the epiphyseal head. The patient made a good post-operative recovery.

X-ray examination of the left hip after insertion of the Smith-Petersen nail on May 7, 1948, showed excellent position. X-rays on June 1, 1948, show no evidence of absorption about the nail with position of parts excellent. The patient was discharged on June 5, 1948, to return at a later date to have the nails removed.

The third admission of R. P. was on January 5, 1949, when he re-entered the Central Maine General Hospital for the removal of the nails from both hips. Since the above operations, he has been very well and has been able to walk better with only a slight amount of pain in the right hip region after long exercises

Physical examination now presented a white male 17 years of age, obese but somewhat thinner than on his previous admissions. Blood pressure 130 over 70. Physical examination essentially negative. Motions of both hips fairly good except for a limitation in internal rotation of the left hip to about 25 degrees and of the right hip to about 20 degrees. Other motions of the hips good except for about 10 degrees limita-



tion of flexion at the right hip joint. Reflexes, normal; blood, urine and serology normal.

The patient was operated on January 7, 1949, and both Smith-Petersen nails were removed. The right was quite overgrown with bone and was more difficult to remove.

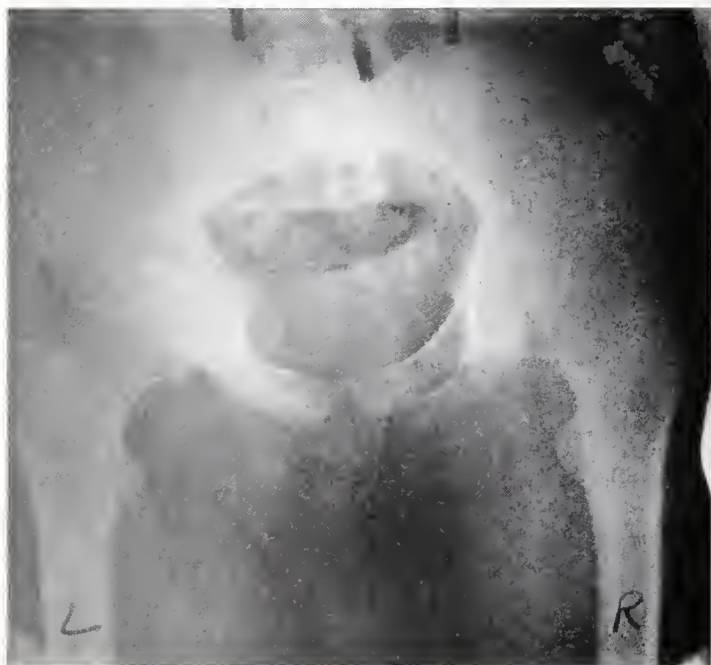
Figure 1.



Case 1.—R. P. before removing nails. Jan. 6, 1949.

Patient did not lose much blood and was in good condition post-operatively. January 14, 1949, half of the stitches removed from the incision and the wound was healing by first intention. January 16, 1949, the remainder of the stitches removed. Temperature had

Figure 2.



Case 1.—Jan. 21, 1949. R. P. nails removed.

been below 99 for the past 24 hours. From the 16th of January to the 5th of February, patient continued to spike a fever up to 101 degrees nearly daily, no obvious cause was found for this temperature rise.

January 21, 1949, X-rays of both hips: Both nails have been removed. Fusion appears to be complete along the epiphyseal lines. The position is good on the left side; on the right side as previously mentioned there is posterior rotation of the head.

Patient was up and about on January 21, 1949, and was discharged from the Central Maine General Hospital on February 5, 1949, with condition on discharge improved. On date of discharge patient was able to walk without any assistance and without any crutches. The internal rotation was limited on the left to about 30 degrees and on the right to about 25 degrees. External rotation was within normal limits. Flexion, rotation and extension of both hips were within normal limits.

*Note:* This case presents a bilateral minimal slipping of the femoral capital epiphysis, with nailing in situ and a good ultimate result.

*Case 2.*—J. G., female, age 12—Chief complaint: injury to left hip following fall.

*Family History:* Mother, nervous and sick; father, living and well; brother 14, living and well; no history of tuberculosis, rheumatic fever, cancer or allergy.

Figure 3.



Case 2.—December 8, 1948. J. G.—Oblique view before traction.

*Past History:* Occasional colds; patient began menstruating this summer and has flowed every two weeks. Two weeks ago she fell down and has had pain in left hip ever since.

*Present Illness:* This 13-year-old girl fell down at 10:30 A. M., today and she tried to get up and fell down again with pain in left groin. She was referred to a doctor's office and from there to the hospital. X-rays taken on December 8th and 9th of 1948, revealed that the left hip showed a marked slipping of the epiphysis of the femoral head. The femoral head was displaced backwards and downwards.

*Physical Examination on Admission:* Showed the pulse 92; temperature 100.4; respirations 22; head, normal; eyes, normal; ears, nose, throat, normal; neck, normal; chest, clear to percussion and auscultation; heart, no murmurs; rate 90; rhythm regular. Abdomen, normal except for tenderness in left lower quadrant; genitalia, menstruating; extremities, the left leg is shorter than the right by about two inches and it is rotated outwardly and there is intense pain in the hip on movement which pain radiates down the knee. Reflexes, normal.

*Clinical Course:* Traction was immediately applied to the left lower extremity with the foot of the bed elevated and 25 and then 30 pounds of weight, later 35 pounds of traction applied. X-rays on December 14, 1948, of the left hip reveal considerable improvement in relationship of the head to the neck.

Figure 4.



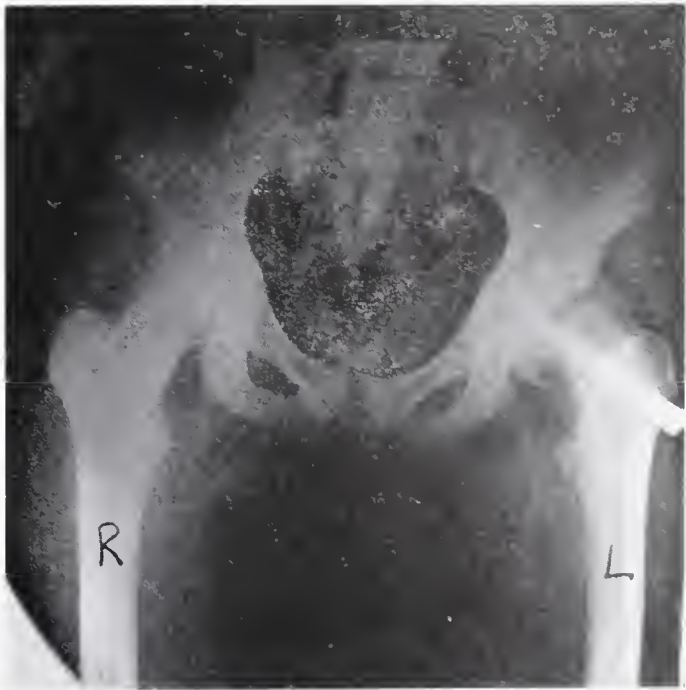
Case 2.—December 14, 1948. J. G. after traction.

There is only a minimal degree of upward displacement of the neck; the lateral view shows about 0.5 cm. of posterior displacement of the head associated with the anterior rotation of the neck.

Lateral view of the right hip shows no abnormality.

On December 17, 1948, a Smith-Petersen nail was inserted into the left hip with the parts of the hip in situ as seen on the X-ray taken on December 14, 1948. Some difficulty was encountered since the wires and the nail seemed to rotate the epiphysis about and perhaps aggravate the position to some extent so that a little of the improvement was lost in this procedure. The nail was inserted right in the center of the neck and head as seen both antero-posterior and lateral views but because of the continuous motion of the head, the nail was driven a little beyond the articular surface of the head.

Figure 5.



Case 2.—January 4, 1949. J. G. nail inserted in situ. A-P view.

X-rays on December 17, 1948: Reveal a slight further posterior rotation of the femoral head with the Smith-Petersen nail inserted in the center but projects beyond the articular surface of the head. The patient made a good post-operative recovery. The incision healed well and the traction was removed on January 3, 1949, and the patient was up on crutches with no weight bearing on the involved leg.

*Laboratory Findings:* Blood and urine were normal; serology was normal; the patient was discharged on January 7, 1949, to be treated as an out-patient and to re-enter the hospital at a later date for removal of the nail.



Figure 6.



Case 2.—Jan. 4, 1949. J. G. nail inserted in situ. Lateral view.

Second admission of Miss J. G. was on May 12, 1949, and she was admitted for removal of the nail from the left hip.

*Present Illness:* Patient was hospitalized here in December, 1948, for treatment of slipped femoral epiphysis of the left femur. She is now re-admitted for removal of the nail. She has been well since she left the hospital.

*Physical Examination:* Is essentially negative. There is a long well healed scar on the lateral aspect of the left thigh. The left leg appeared approximately  $\frac{1}{2}$  inch shorter than the right and motions of the left lower extremity reveal limitation of internal rotation to about 20 degrees; external rotation normal; extension normal; flexion limited to about 125 degrees. There is no pain on motion. Patient is able to walk with a very slight limp.

*Laboratory Findings:* White and differential blood counts normal; urine normal.

X-rays taken as an out-patient revealed that the epiphysis had healed over, with the nail in good position but extending beyond the articular surface of the head.

On May 13, 1949, through a small lateral incision the Smith-Petersen nail was removed from the left hip.

X-rays taken on May 13, 1949, of the left hip revealed that after the removal of the nail the femoral

epiphysis was firmly united to the neck. There was some demineralization of the inferior portion of the head.

Figure 7.



Case 2.—J. G. X-ray after removal of nail on May 13, 1949. A-P view.

The patient made a very good post-operative recovery and was discharged on May 22, 1949.

The patient has been seen since her discharge from the hospital on May 22, 1949, and her motions of the left hip are good except for some tendency to hold the left lower extremity in 10 degrees external rotation. Internal rotation is limited to about 25 degrees and there is a limitation of flexion to about 130 degrees. The patient walks with a very slight tendency to a limp of the left lower extremity and has a  $\frac{1}{2}$  inch shortening of left limb. She is able to bend down and sit down quite easily and is attending school at present.

This above case is an example of an acute slipping of an epiphysis treated by traction with moderate success in reduction and then nailing the hip in situ. In this case where the nail did extend beyond the head, it would be wise to watch the patient and see if there would be any X-ray evidence later of necrosis of the head or of arthritis. To date there has been no evidence of it except for a slight suggestion of demineralization of the inferior portion of the head.

*Case 3.*—J. B., age 13, admitted to the hospital July 29, 1939. This very tall boy had been complaining of pain in his right hip region for several months before admission. He blamed it onto the fact that the chil-

dren at school took pleasure in punching him in the right hip joint because he complained of it. Repeated examinations by physicians were negative and the condition was disregarded as merely a sprain or contusion resulting from the impacts of the above described punching by other children of the hip.

For the past three months he had been walking with a limp. The pain occurred while walking but he never had any at night. About six hours before admission to the hospital the patient dove into the water and felt something snap in his right hip region. He was unable to swim and was brought to shore. Upon landing he was unable to move the right lower extremity because of severe pain on motion.

X-rays of the pelvis and hips showed a marked slipping of the epiphysis of the right hip.

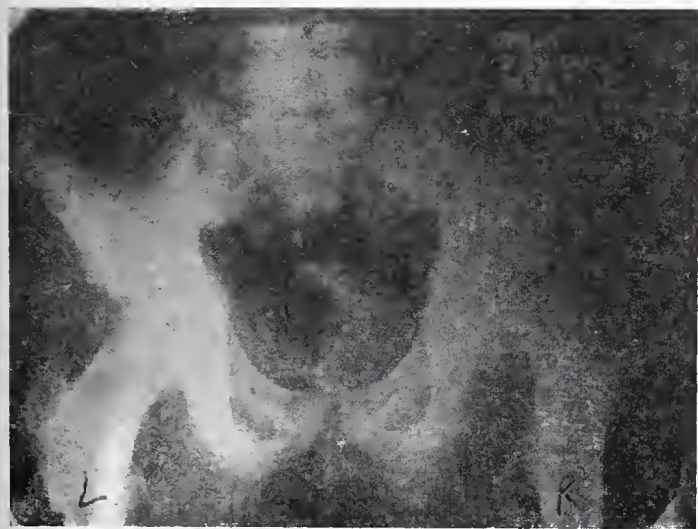
On August 2, 1939, the hip was manipulated under anesthesia and a plaster of paris Spica was applied. Prior to the manipulation and the application of a cast, the patient had been in traction from July 29, 1939, to August 2, 1939, without any improvement in condition. Re-examination by X-ray several days later revealed persistent posterior displacement of the

the junction of the epiphysis and neck and a Smith-Petersen nail was inserted. The patient was in traction for some time but later was up on a non-weight bearing brace on the right lower extremity with a raised sole of the left shoe and used crutches until the epiphysis was fused. When X-rays revealed that the epiphysis was fused, the nail was later removed and the patient made a complete recovery.

Following the above episode, the patient had been working and had been accepted in the armed forces where he served for over two years. Quite recently I saw this patient who was 22 years old and who had been working without any difficulty.

Examination of his right hip on May 26, 1947, revealed perfectly normal motions. X-rays in both views, A P and laterally revealed a perfectly well healed hip with very little abnormality with good solid bone and with no signs of any arthritis or coxa vara.

Figure 8.



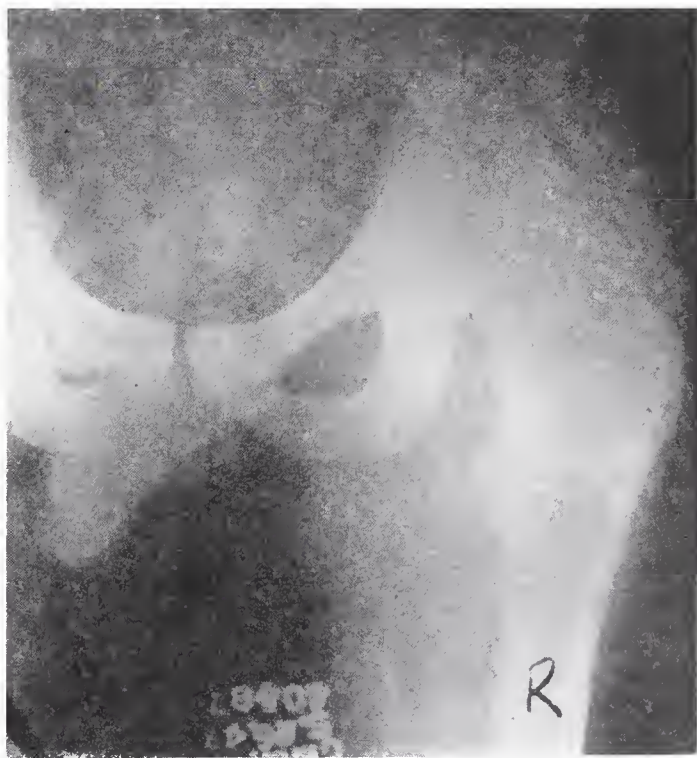
Case 3.—July 29, 1939. J. B. before treatment.

head. On August 10, 1939, the hip was again manually reduced under anesthesia and placed in a plaster of paris Spica. X-rays on August 14, 1939, of the right hip in plaster shows in comparison with the original plate, definite improvement in the position of the right capital femoral epiphysis. Some degree of displacement medially and posteriorly persists.

Since the mother of the patient was informed that the head was not perfectly replaced onto the neck she decided to sign the patient out and take him elsewhere.

I was later informed by the mother that an arthrotomy had been performed elsewhere and the joint had been opened and an osteotomy was done at

Figure 9.



Case 3.—May 26, 1947. J. B., A-P view.

The only X-rays available in this particular case are the ones on July 29, 1939, and those very last ones which I had taken on May 26, 1947, since the others have been borrowed by the mother when she signed her son out of the hospital and we have never been able to recover them.

*Conclusion:* Slipped capital femoral epiphysis occurs especially between the ages of 10 and 17 and is more prevalent in boys than in girls. The so-called pre-slipping stage and the minimal slipping stage where the epiphysis has slipped backwards and downwards for no more than one centimeter are best



Figure 10.



Case 3.—May 26, 1947. J. B. lateral view.

treated by nailing in situ. It is wise to observe the contralateral side for similar slipping which does take place in many cases. The ultimate result in this group of cases is usually very good.

In the acute slipping stage or the chronic slipping stage the ultimate results are not so good, since in these cases one does not have as good a possibility of avoiding arthrotomy accompanied by nailing as he does in the earlier stages. In these stages one usually has to reduce the slipping by means of manipulation, traction and usually by opening the joint and replacing the epiphysis by means of a skid or by means of an osteotomy and then nailing or cast immobilization. All this trauma naturally affects the circulation of the head. The possibilities of aseptic necrosis and arthritis are greater in cases where arthrotomy is necessary.

The late stages of epiphyseal slipping are the neglected cases or the improperly treated cases and here one has to resort to radical surgery to obtain some form of comfort for the patient to become a useful member of society.

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## TUBERCULOSIS MORTALITY IN THE UNITED STATES, 1947

In 1947, there were 48,064 deaths from tuberculosis in the United States. The death rate was 33.5 per 100,000 population, which was 8 per cent below the rate for 1946.

This decrease in the tuberculosis death rate continued the downward trend which has prevailed with few interruptions since 1910. Of the total deaths from tuberculosis in 1947, more than ninety per cent were attributed to respiratory tuberculosis. For both respiratory and nonrespiratory infections, mortality was much greater for nonwhites than for whites and greater for males than for females.

Death rates for tuberculosis in the white population and for nonwhite males were lower in the young adult years than in the older age groups, while for nonwhite females the highest rates occurred in the

young adult group. Among all young adults, the rates were higher for females than for males; among older persons, the rates were much higher for males. The rates for nonwhites were far above those for whites in all age groups except 75 years and over.

Death rates for tuberculosis were lower in 1947 than in 1939-41 for almost all population groups. In general, greater gains were made by females than by males, and by younger than by older persons. The only increases in rates were for males in the age groups over 55 years and for nonwhite females 65-74 years of age. Tuberculosis death rates in 1947 by State of residence ranged from 11.8 for Iowa to 100.0 for Arizona.

Tuberculosis Mortality in the United States, 1947, Sara A. Lewis, *Public Health Reports*, April 1, 1949.

## CLINICO-PATHOLOGICAL EXERCISE

### Case presented at Maine General Hospital, Portland, Maine

Edited by JOSEPH E. PORTER, M. D.

This 69-year-old white married female was admitted to the hospital with the chief complaint of inability to move the left side, of two weeks duration. History as obtained from daughter: The patient apparently fell while getting up to go to the bathroom; when the family investigated they found her lying on the floor. No further history was obtainable, apart from a history of hypertension, for which she had been treated for a number of years. She was kept at home, and from what information could be obtained, showed some improvement.

Physical examination: Temperature 100.8° (R): pulse 115; respirations 25; blood pressure 148/98. A very obese patient, lying quietly in bed, and in no particular distress, although there was some mucus in the throat, which she had great difficulty in clearing. She was quite rational, and although she had difficulty in speaking, her speech was comprehensible. Eyes: Both pupils were round and equal, reacting to light and accommodation; no nystagmus or strabismus was evident. Fundi appeared normal, although there was some blurring of the edges of the discs. The right palpebral fissure was narrowed. Neurological examination: Reflexes: Biceps, triceps, supinator, and knee jerks 3+ on right, 2+ on left; ankle jerks present on right, absent on left; ankle clonus absent on right, present on left; patellar clonus absent bilaterally. Hoffman's sign absent on right, present on left, Babinski negative on right, present on left. Abdominal reflexes could not be elicited. Sense of position was absent in left foot, with respect to position of toe. Sensation of pinprick was normal on both sides. Cranial nerves were not remarkable, except for the 7th, which showed right and left facial paralysis, the 9th, which showed palate elevated to the left, and the 12th, which showed slight protrusion to right.

Laboratory work: Lumbar puncture on admission: Initial pressure 205 mm.; 8cc. of clear colorless fluid removed, and final pressure 150 mm. Fluid showed 205 red cells, and 4 white cells. Total protein was 20 mg.; Wasserman and colloid gold negative. Blood: Hemoglobin 96%, 13.9 gms.; RBC. 4,760,000; WBC. 12,600, with 84% polynuclears, 14% lymphocytes, and 2% monocytes. Blood Hinton was negative.

Electroencephalogram was done the day after admission, with the following impression: "This record is not definitely abnormal, and there is certainly no good evidence of a localized focus. Technically difficult to interpret."

On the second hospital day the patient seemed more drowsy than on admission, and did not respond very well; diagnosis was still considered questionable. The highest temperature was 100.2° (R), pulse 100, and respirations 25.

On the third hospital day the patient's condition seemed much worse; she did not respond to stimuli; breathing was rather difficult and color poor. The temperature rose to 100.8° (R), pulse to 100, and respirations to 30, and she expired.

#### DISCUSSION

*Dr. C. Lawrence Holt:* Asking a member of the medical service to discuss this neurological case is like leading a lamb to slaughter. Before someone compels me to admit it, I shall state now that I can make no definite diagnosis. Any neurological diagnosis is as accurate as the examination performed, and there are a few items here which are confusing to me, particularly with reference to the eye signs. It is of interest to make an anatomical neurological diagnosis first. The signs point to a lesion high in the medulla on the right. If it is true that the palate is deviated to the left, and the tongue to the right, it is fair to include some portion of the 9th, 10th, 11th, and 12th cranial nerves. If the right palpebral fissure was narrowed, because of involvement of the right cervical sympathetic trunk, then the lesion would be placed extramedullary in the region of the right jugular foramen. The fact that the pupils were equal, however, speaks against sympathetic involvement. If the right palpebral fissure is narrowed, because of involvement of the levator palpebrae muscle, it would suggest that there was a peripheral facial lesion on the right, and a central on the left. The picture is somewhat confusing. If more eye signs had been present, one could consider a Millard-Gubler syndrome, which invariably is due to a vascular lesion, not infrequently a basilar thrombosis, and the dramatic onset of the illness would suggest such a lesion. The lack of eye signs, however, leads me to believe that such a diagnosis is not the correct one. I shall place the anatomic lesion either high in the medulla, including the nuclei of the 9th, 10th, 11th, and 12th nerves, and the peripheral fibers before they run out of the medulla, or to place the lesion at the right jugular foramen, with secondary pressure against the medulla, involving the pyramidal tract, above the decussation.

The pathological diagnosis appears even more confusing to me than the anatomical one. The onset of



the patient's symptoms were apparently abrupt. It seems that this 68-year-old woman was in good health except for hypertension, got out of bed, and fell suddenly to the floor. If true, this suggests a very abrupt thing, favoring a vascular lesion. There is nothing in the protocol to suggest heart disease, with embolism and I have no reason to make such a diagnosis. Rupture of a congenital basilar artery aneurysm at this age is unusual, and the serology is certainly against a luetic lesion. Rupture of an arteriosclerotic aneurysm should have given a bloody spinal fluid. The one type of lesion that comes nearest to fitting the picture is a thrombotic lesion, involving particularly the pyramidal tracts high in the medulla. As stated earlier, a Millard-Gubler syndrome is suggested, but there is nothing in the history to indicate that the eyes were involved. I will therefore vote against the vascular lesion.

The element of trauma enters the picture when we are told that this woman fell out of bed in the night. It is possible that she might have struck her head and received a subdural hematoma, but one involving the base of the brain is unusual. Statistically it should involve the temporo-parietal areas, or occipital areas. The EEG does not help us in any localization, except to suggest that the lesion is somewhere near the base of the brain or brainstem, in view of the fact that such lesions frequently cause no abnormality of the tracing, unless considerable increased intracranial pressure is present. A hematoma involving the cranial nerves and medulla on the right side is a rare possibility, but not a probability.

A brain abscess can involve any part of the brain, and give any type of localizing sign or symptom, but statistically an abscess in the posterior fossa should involve some part of the cerebellar hemispheres. There is no suggestion of vertigo or dyskinesia, in this case, and no mention of nystagmus. There is nothing in the history that suggests a primary focus of abscess, such as a lung abscess, bronchiectasis, empyema, osteomyelitis, or furunculosis. A diffuse meningitis certainly does not fit the picture. It is said that there was one polymorph and three monocytes in the spinal fluid; I should doubt the presence of the polymorph. A localized basilar tuberculous meningitis could account for the picture, except for the rapid onset. It seems also that there should have been an elevation of at least total protein and white cells, if such an infection were present.

The last group of pathological lesions are the neoplasms. It is difficult to explain the rapid onset of symptoms on the basis of a neoplasm. However, it certainly is a fact that many neoplasms first manifest themselves this way, either because of the hemorrhage into the tumor or a sudden involvement with edema. It may be that the onset was not as acute as we think, but the protocol states that the onset of symptoms was abrupt, and we therefore must believe this. If it

is a tumor, it might well be a metastatic lesion. There is no reference in the general physical examination to any abnormality of the thyroid gland, the breasts, the pelvic organs, the rectum or lungs. I have no basis, therefore, for making a diagnosis of a metastatic tumor. Of the primary tumors, statistically a glioblastoma multiforme would be the most common, and this is certainly a possibility. The rapid onset of symptoms could be due to a sudden accumulation of fluid in a pseudo-syringomyelic cavity, which are sometimes associated with gliomas in this region of the brain. Another possibility of intracortical lesion is something in the sarcoma group, a lymphosarcoma, for example. Against this is the absence of adenopathy in other parts of the body. If the lesion is extramedullary, and arises near the jugular foramen on the right, it could include something arising from the dura. A meningioma would be a good possibility, since it could cause pressure on the nerves running through the jugular foramen, and giving pressure against the right side of the medulla. Another possibility is one of the lymphoma group. In spite of the statement of many textbooks, no less authorities than Jackson and Parker state that involvement of the central nervous system per se by a Hodgkins granulomatous lymphoma is a rare finding, and perhaps never occurs at all. A Hodgkins sarcoma might involve the central nervous system, but again we have no evidence of such a diagnosis. It is possible that a Hodgkins lymphoma might penetrate the jugular foramen and in this way give rise to extramedullary irritation and pressure.

It is my final opinion that the woman experienced a terminal pneumonia due to her inability to clear the mucus from her throat. The primary lesion is unknown to me. If it is extramedullary, then it arises near the right jugular foramen, and is either a meningioma or a lymphoma. I feel very insecure mentioning lymphoma, since the woman had no other lymphadenopathy.

If it is an intracortical lesion, which I favor, then I would suggest that it was either a glioblastoma multiforme, a sarcoma, or a localized irritation from some sort of vascular lesion, perhaps a hematoma. I would put them in this order.

#### *Dr. Holt's Diagnoses:*

1. Glioblastoma multiforme.
2. Sarcoma of lymphoid group.
3. Localized irritation from a basilar vascular lesion, preferably a hematoma.

*Dr. Joseph Porter:* If it is a glioblastoma, where would you put it?

*Dr. Holt:* High in the medulla on the right side, running into the caudal portion of the pons.

*Dr. Porter:* Dr. Holt has done very well with what he has to work with here.

*Dr. Frank Broggi:* I would not say that the woman died of a medullary lesion. Her pulse was rapid and she had a perfectly normal spinal fluid. I would say that she died of a cerebral thrombosis.

*Dr. Porter:* Where do you think the vascular lesion is?

*Dr. Broggi:* That is questionable. She may have had a Bell's palsy involving the face. The most likely thing would be a vascular lesion. This woman died as the result of a cerebral thrombosis.

#### *Anatomical Diagnoses:*

Basilar artery thrombosis, with multiple areas of softening, throughout the pons, particularly on the right side.

*Dr. Porter:* We have had six of these cases in a five-year period here. Drs. Kubick and Adams<sup>1</sup> have reported a study of this group, and feel that the diagnosis can be made antemortem, although in this case the signs and symptoms are certainly different

from any that they include in their group, and usually include nausea and terminal hyperpyrexia; this woman's temperature only went as high as 101°.

*Dr. George Maltby:* I saw a patient with such a disorder when I first came to Maine. The patient had a facial paralysis on one side, and when I turned around to look at her again, she had a paralysis on the other side.

I think Dr. Holt's description was good. The thing that made this so difficult was the lack of ocular signs, and I cannot understand why they were absent.

*Dr. Holt:* In Brock's textbook of clinical neurology, he gives 25 clinical pictures associated with such a vascular lesion, but the case at hand does not fit any of the pictures.

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## TUBERCULOSIS MORTALITY IN OLDER AGE GROUPS

Mortality statistics compiled for 1947 show that tuberculosis death rates have again declined in the United States. In 1947, the rate was 33.5 per 100,000, as compared to 36.4 in 1946. These gratifying figures show progress is still being made toward the goal — the disappearance of tuberculosis from the United States.

An analysis of the 1947 mortality data brings out a fact which is very significant. The proportion of deaths from tuberculosis among people over 45 years of age is steadily increasing.

For many years tuberculosis was a disease primarily of young adults between the ages of 15 and 44 — people in the prime of life, wage earners, parents of small children, young people just starting their life work. In 1900, for example, almost two out of three of all the reported tuberculosis deaths were in this age group. Only one out of four of those who died was 45 or over. By 1940, over half of the tuberculosis deaths reported still took place among people between the ages of 15 and 44, but deaths of those 45 and older had risen to 42 per cent of the total.

An important factor in this shift has been the fact that mortality rates have declined more slowly in the older age groups than the younger and the greater number of older people in the country's population further accentuates the degree of change.

The shift toward older ages at death has great significance for tuberculosis case-finding activities. A study of a recent mass X-ray survey made in a

Georgia county contains one of the few available tabulations of the ages of those X-rayed. It was disappointing to see the small percentage of older people who took part in that survey. Although 62 per cent of the population of the county in the age group 45-54 were X-rayed, the percentage fell rapidly in older age groups; only 17 per cent of those 75 and over participated.

Obviously there are many reasons why people do not take part in mass surveys. Many of the very old people could not participate because of illness or incapacity. Many others not so old, however, failed to be examined because they think tuberculosis is a disease they have "outgrown." They must be cautioned that those over 45 are subject to tuberculosis just as younger people are.

Control workers should be reminded that older people form a major source of infection in the population. Special efforts are needed to discover the disease among those over 45 for the protection both of individuals and of the community. All men and women, young and old, should be urged to have periodic X-ray examinations either in mass surveys or as part of their annual physical examination by private physicians. Only by special emphasis and special efforts can all cases of tuberculosis be discovered, isolated, and brought under treatment.

Tuberculosis Mortality in Older Age Groups, Robert J. Anderson, M. D., *Public Health Reports*, April 1, 1949.



## THE PRESIDENT'S PAGE

What determines the success of the Maine Medical Association?

This is a question that may well be asked at the end of each year. The long range accomplishments may, of course, extend over a period of years. However, each year should bring a summary of what has been achieved.

The detailed work of the organization is in the hands of the various committees and the over-all program for the year is a summation of the activities of these committees. Naturally the functions of different committees vary each year according to the demands of the situation. For instance the committee on Health Insurance has been working intensely for the past three years on its objective. The Scientific Committee has its annual arduous duties. This year the Committee on Public Relations is of necessity very active as is the State Committee for the National Education Campaign. The Committee to study the revision of Constitution and By-Laws has a good-sized job on its hands. There are many other committees of equal importance that are carrying on the regular routine work. These may not have an urgent objective this year, but the sum total of all their efforts makes an effective program.

May I urge the Chairmen and members of all committees to study carefully the objectives and functions of their respective committees and initiate activities when they are needed. The importance of each member of a committee feeling full responsibility for the activities of that committee cannot be over-emphasized: viz, each member should take an active part in the proceedings of his committee.

If each committee functions, the aggregate of the work of all committees will produce a successful program.

RALPH A. GOODWIN, M. D.,  
*President, Maine Medical Association.*

## EDITORIAL

### DR. RALPH J. GAMPELL

#### **Your Guest Speaker, Sunday Evening, November 6th**

Dr. Ralph J. Gampell, a voluntary exile from Great Britain's socialized medical system, will address the evening meeting of the Fall Clinical Session on Sunday, November 6th, at Waterville. This meeting will be open to the Public.

Now a resident of San Francisco, Dr. Gampell is aiding the National Education Campaign of the American Medical Association against Government-controlled medicine. He draws upon his own experience as a practicing physician in England to warn against adoption of National Compulsory Health Insurance in this country.

He served five years in the Medical Branch of the Royal Air Force (1941-1946) and entered general practice in England in April, 1947. Born in Manchester, England, 33 years ago, he was graduated from the University of Manchester in 1940 with the degree of M. B. CH. B. (Equivalent to the M. D. degree in the U. S.).

Dr. Gampell carried on a highly successful practice for two years in an industrial area in Great Britain but gave it up because of his objections to "political medicine." He came to the United States in April, 1949, and is doing an internship at St. Joseph's Hospital in San Francisco to qualify for a California license.

He has explained in newspaper and radio interviews that practice under the British National Health Service was so objectionable, he felt compelled "to break all my ties with home and friends and professional background and start afresh, from the bottom, in a new country."

He will tell in his address how he had to handle 20 patients an hour in his office and will describe his encounters with "baffling bureaucratic red tape."



## COUNTY SOCIETIES

### Androscoggin

President, LeRoy C. Gross, M. D., Auburn  
Secretary, Irving I. Goodof, M. D., Lewiston

### Aroostook

President, Joseph A. Donovan, M. D., Houlton  
Secretary, Clyde I. Swett, M. D., Island Falls

### Cumberland

President, Charles H. Gordon, M. D., Portland  
Secretary, Ralf S. Martin, M. D., Portland

### Franklin

President, Maynard B. Colley, M. D., Wilton  
Secretary, Paul E. Floyd, M. D., Farmington

### Hancock

President, James H. Crowe, M. D., Ellsworth  
Secretary, Charles H. Knickerbocker, M. D., Bar Harbor

### Kennebec

President, Harold E. Small, M. D., Augusta  
Secretary, Arch H. Morrell, M. D., Augusta

### Knox

President, Frederick C. Dennison, M. D., Thomaston  
Secretary, Frank W. Kibbe, M. D., Rockland

### Lincoln-Sagadahoc

President, Philip H. Sylvester, M. D., Damariscotta  
Secretary, Neil L. Parsons, M. D., Damariscotta

### Oxford

President, Roland L. McCormack, M. D., Norway  
Secretary, Dexter E. Elsmore, M. D., Dixfield

### Penobscot

President, Henry C. Knowlton, M. D., Bangor  
Secretary, Herbert C. Scribner, M. D., Bangor

### Piscataquis

President, John B. Curtis, M. D., Milo  
Secretary, Norman H. Nickerson, M. D., Greenville

### Somerset

President, Albert J. Bernard, M. D., Skowhegan  
Secretary, H. Carl Amrein, M. D., Madison

### Waldo

President, John A. Caswell, M. D., Belfast  
Secretary, Raymond L. Torrey, M. D., Searsport

### Washington

President, Samuel R. Webber, M. D., Calais  
Secretary, Karl V. Larson, M. D., East Machias

### York

President, J. Robert Downing, M. D., Kennebunk  
Secretary, C. W. Kinghorn, M. D., Kittery

## COUNTY SOCIETY NOTES

### Hancock

A regular meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, September 14, 1949. There were nine members present.

The meeting was opened by Dr. James H. Crowe. A committee comprised of Dwight Cameron, M. D., Chairman; Edward Thegan, M. D., and Herbert T. Wilbur, M. D., was appointed to publicize Diabetes Week, October 10-16. A motion was made and carried that the society does not oppose sale of diabetic self-tester units by druggists in the county. A motion was made and carried that the society favors free urine testing for sugar by all members during diabetic week. A motion was made and passed that the society does not wish to attempt to form a Ladies Auxiliary.

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Kennebec

A regular meeting of the Kennebec County Medical Association was held at the Augusta House, Augusta, September 22, 1949.

President Harold E. Small presided at the business session. The records of the previous meeting were read and approved. He read a letter from the State Secretary, Frederick R. Carter, relative to the amendment to Article IV of the Constitution of the Maine Medical Association, and the Fall and April meetings of the House of Delegates.

The question of the suspension or cancellation of dues in hardship cases was raised from the floor and the Council was asked to study the matter and report.

Dr. Charles E. Towne, of Waterville, reported relative to the program for the Fall Clinical Session of the Maine Medical Association, to be held in Waterville, November 6 and 7.

Leland S. McKittrick, M. D., of Boston, was guest speaker of the evening. His subject was "Diagnosis of Gallstones and their Complications." His talk, which was illustrated, was learned and instructive. He brought out many points such as the sequence of stone-obstruction; secondary infections; the importance of a change in the frequency of attacks, or a run of chills or fever; the frequency of the attacks is as important as jaundice in the diagnosis of common direct stone.

The meeting adjourned following a period of discussion.

A. H. MORRELL, M. D.,  
*Secretary.*

### Lincoln - Sagadahoc

The Lincoln-Sagadahoc Medical Society met on Wednesday, September 14, 1949, at the Bath Country Club, Bath, Maine. There were fifteen doctors and dentists present.

Following routine business a case of "Tetanus" was presented by Dr. Robert Belknap of Damariscotta.

The movie, "Assignment, Medicine," was presented by Sgt. Morin of Bath, and greatly enjoyed.

Dr. Thomas O'Connor and Dr. Ralph Powell were admitted to membership.

NEIL L. PARSONS, M. D.,  
*Secretary.*

### Washington

A regular meeting of the Washington County Medical Society was held Wednesday, September 14, 1949, at the Johnson House, Dennysville, with eleven members of the Medical

*Continued on page 306*





**DRAMAMINE\*** (Brand of *dimenhydrinate*)

has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for the prophylactic and therapeutic relief of motion sickness.

\*TRADEMARK OF G. D. SEARLE & CO.





Society, nine members of the Ladies Auxiliary, and two guests present.

Following an excellent chicken dinner served at 6.30 P. M., Dr. Hazen Mitchell of Calais, Maine, Vice President of the Washington County Medical Society, introduced Dr. Hans Waive of Boston, Medical Director of the New England Chapter of the Arthritis and Rheumatism Foundation. Dr. Waive outlined the different types of arthritis and their treatment. He said that the pyogenic type of arthritis was amenable to treatment with anti-biotics and that the Arthritic Foundation would soon have a service so that the individual physician could send in specimens of synovial fluid for examination and determine which type of anti-biotic to use. He stated that Gout, which is about 5% of all arthritis, can be quite easily treated with a new material called ACTH and that this combined with the old treatment colchicine would give immediate relief. For the degenerative type of arthritis which affects 80% of the people over 50 there is no new treatment but for Rheumatoid Arthritis which is the type producing crippling of the fingers and the joints there are two new compounds which have produced dramatic results while the patient is undergoing treatment. These new compounds are ACTH and Cortisone or Compound E. He used a short movie illustrating the dramatic relief with use of the new drugs. The main drawbacks now are the expense of the drug, \$100 a day for treatment, and the fact that there is relief usually only while the drug is being given. Dr. Waive stated that several other serious diseases have been helped by the use of Compound E but its use in those diseases is still under investigation.

At the business meeting the following officers were elected:

President—Samuel R. Webber, M. D., Calais.

Vice President—Herbert S. Everett, M. D., St. Stephen, N. B.

Secretary-Treasurer — Karl V. Larson, M. D., East Machias.

Board of Census—John T. Metcalf, M. D., Calais (Three years).

Delegate to Maine Medical Association—Norman E. Cobb, M. D., Calais.

Dr. Willard H. Bunker of Calais, our Ex-President is leaving shortly for York Harbor to practice. The Medical Society is losing a very active member and Washington County is losing a very well-known and well-liked physician.

The next meeting of the Society will be in Calais on Thursday, November 10th.

KARL V. LARSON, M. D.,  
Secretary.

## New Members

### Lincoln-Sagadahoc

(Admitted September 14, 1949)

Thomas O'Connor, M. D., Boothbay Harbor, Maine.

Ralph Powell, M. D., New Harbor, Maine.

### York

(Admitted October 12, 1949)

Andre P. Fortier, M. D., Biddeford, Maine.

Marcel P. Houle, M. D., Biddeford, Maine.

## CORRESPONDENCE

### Veterans Administration Center

#### Togus, Maine

October 14, 1949

All Fee-Basis Physicians—

Dear Doctor:

The Veterans Administration, Washington, D. C., has issued a directive which states those articles, in addition to drugs and medicines, that a doctor can prescribe on prescriptions to be filled by the home-town Pharmacist. To acquaint the doctors with this list and to prevent the necessity of requiring the doctor to reimburse the Treasurer of the United States for unauthorized articles, this letter is written.

In addition to drugs and medicines, the following list of medical supplies may be furnished the eligible veteran on prescription:

1. Insulin syringe and two (2) needles
2. Two (2) hypodermic (insulin type) needles
3. Atomizer
4. Nebulizer
5. Hot water bottle

6. Fountain syringe
7. Combination hot water bottle and syringe
8. Ice bag
9. Ice cap
10. Urinal
11. Bed pan
12. Enema can
13. Feeding tube
14. Ear and ulcer syringe

The following medical supplies CANNOT be prescribed:

1. Sterile gauze
2. Bandages of all descriptions
3. Adhesive plaster
4. Crutches
5. Elastic stockings, knee caps, etc.
6. Back supports, corsets, etc.

These articles will be furnished the veteran by the Out-Patient Division, at Togus, Maine, if the veteran is eligible for such supplies and upon a written request from the home-town Physician.

Very truly yours,

LORRIMER M. SCHMIDT, M.D.,  
Chief, Out-Patient Division.

## NOTICES

### Tumor Clinics

Sisters Hospital, Waterville, Maine, 1st and 3rd Thursdays, 10.00-11.00 A. M., Richard L. Chasse, M. D., Director.

Augusta General Hospital, Augusta, Maine, 1st Monday, 9.00 A. M., Leon D. Herring, M. D., Director.

Bath Memorial Hospital, Bath, Maine, 2nd Tuesday, 3.00-5.00 P. M., Francis A. Winchenbach, M. D., Director.

Maine General Hospital, Portland, Maine, Thursdays, 10.00 A. M., Joseph E. Porter, M. D., Director.

Presque Isle General Hospital, Presque Isle, Maine, Thursdays, 10.00-12.00 A. M., Storer W. Boone, M. D., Director.

Madigan Memorial Hospital, Houlton, Maine, 2nd and 4th Wednesdays, 10.00-12.00 A. M., Joseph A. Donovan, M. D., Director.

Central Maine General Hospital, Lewiston, Maine, Tuesdays, 10.00 A. M., Waldo A. Clapp, M. D., Director.

St. Mary's General Hospital, Lewiston, Maine, Wednesdays, 3.30 P. M., Romeo A. Beliveau, M. D., Director.

Eastern Maine General Hospital, Bangor, Maine, Thursdays, 10.30 A. M., Magnus F. Ridlon, M. D., Director.

Thayer Hospital, Waterville, Maine, 2nd and 4th Thursdays, 10.00-11.00 A. M., Arthur H. McQuillan, M. D., Director.

Dr. Edward H. Risley Honored

At the annual session of the New England Surgical Society, held at the Mt. Washington House in Bretton Woods, September 23-24, 1949, Dr. Edward H. Risley of Waterville was elected President for 1949-1950.

Venereal Disease Clinics

The Department of Health and Welfare, Bureau of Health, maintains facilities for the diagnosis and treatment of venereal diseases in the following locations:

- Augusta, Bangor, Bath, Belfast, Biddeford,
- Lewiston, Portland, Rockland, Rumford,
- Sanford, Waterville, Wilton and Winthrop.

Any physician wishing to refer an indigent person for diagnosis or treatment may obtain the name of the nearest clinic physician by contacting the Department of Health and Welfare, Bureau of Health, State House, Augusta, Maine. If no clinic facilities are available, physicians will be authorized to treat indigent patients in their offices. Authorization should be requested before treatment is started.

Plan To Attend

The Eighth Annual Postgraduate Assembly  
Copley Plaza Hotel  
Boston, Massachusetts  
November 9, 10, and 11, 1949  
Sponsored in part by your state medical society  
Excellent speaking program  
Television—Exhibits

You should have received your program by mail, if not, write for one to the New England Postgraduate Assembly, 8 Fenway, Boston 15, Massachusetts.

HOSPITAL STAFF MEETINGS  
Open to the Profession

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General St. Mary's General	1st Monday 2nd Monday
Portland	Maine Eye and Ear Infirmary Maine General Mercy	1st Tuesday 2nd Friday 3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters Thayer	2nd Tuesday Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.



# Proceedings

## NINETY - FIFTH ANNUAL SESSION

### Maine Medical Association

#### House of Delegates

#### POLAND SPRING, MAINE

#### June 19, 20, 21, 1949

(Continued from the September issue of the JOURNAL, page 275)

CHAIRMAN RALPH A. GOODWIN: Under the matter of unfinished business, there was a resolution presented at the 1948 annual session, which I shall read, and it should be taken up at this time:

"Therefore, be it resolved by the House of Delegates of the Maine Medical Association, in convention assembled, as follows: To amend Article IV of the Constitution of the Maine Medical Association by adding at the end thereof the following: And when recommended by his County Society any member in good standing who has attained the age of seventy may, by vote of the House of Delegates, become a senior member of the Association without further payment of dues, and without loss of any of the rights and privileges as members."

This may now be acted upon at this meeting, because it was presented at the annual session a year ago. The gist of it is that members of the county societies, who have attained the age of seventy, when recommended by their county, may become senior members without further payment of dues.

DR. FRANK A. SMITH: Mr. Chairman, does the Society pay his dues to the A. M. A.? How is he going to have all of those privileges?

DR. THOMAS A. FOSTER: There are no dues paid to the A. M. A. The dues are paid to the County and State societies. Of course, if you want to become a Fellow of the A. M. A., you subscribe to a magazine and pay the dues when you pay for your magazine.

CHAIRMAN GOODWIN: I think that that clarifies it. There are no dues paid to the A. M. A.

There is a motion before the House that this resolution be adopted as an amendment to the Constitution. Is there a second to that motion?

DR. MARTYN A. VICKERS: I will second the motion.

DR. C. HAROLD JAMESON: Do the Annual Dues to the State Society include the charge for the JOURNAL?

SECRETARY FREDERICK R. CARTER: That is right; yes.

DR. JAMESON: There is no separate charge for that?

SECRETARY CARTER: That is right.

CHAIRMAN GOODWIN: Is there any further discussion? If not, all those who are in favor of the resolution will please signify by saying "aye." Those opposed?

There was a chorus of "ayes" and the motion was carried, and the resolution was adopted.

CHAIRMAN GOODWIN: Under new business, I am going to call upon Dr. Vickers of Bangor, who has been appointed State Chairman of the National Educational Campaign for the State of Maine. Perhaps he would like to tell us about what he is going to do.

DR. VICKERS: There are three things that I should like to do at the present time.

First, where the National Physicians' Committee has been disbanded, I would like to put a resolution on the floor of this House, that the National Physicians' Committee of

Maine, be discontinued as of now. It has no function any further. There has been some agitation to have it continued, but it is officially disbanded, and I should like to have a resolution put through that the National Physicians' Committee be disbanded.

Secondly, I should like to introduce Larry Rember, Assistant to the Executive Secretary of the American Medical Association. [Applause] Incidentally, he is here because he likes Maine, and he is here, also, because I thought that it would be nice to have a representative of the American Medical Association at one of our meetings. I told him so last year, when I was in Chicago at the National Physicians' Committee meeting, and I think that that is probably the reason that he came on here.

The third thing that I should like to mention is that Harold Jameson and I put in a bill before the Legislature on pollen and fungus studies to be done in the State of Maine. I am going to brag a little bit. It is through and passed, and money was appropriated. It was the only bill that went through the Legislature that had an appropriation to go with it. It has to be put into effect. That work is to be done over a two-year period. It will have to do with air-borne pollen and fungus. As soon as the information is completed, it will be made available to those interested, and those who would like to know.

It is my feeling that it will have considerable economic significance to various hotels and summer places throughout the State, because we do have areas that are pollen-free and they will be publicized by the Maine Development Commission, when this survey is completed.

I want to mention a little bit about the Committee on Education in this State of Maine. We are going to set up a group which will be under the direction of the doctors, and which will have as the coöperating members any groups in the State willing to loan themselves and make their personnel available to combat the socialization of medicine. We will work through the Public Relations Committee of the State Society headed by Dr. Frederick T. Hill.

There is to be picked by each county, and if the County does not see fit to choose a member, an individual will be chosen. Some of the men have already been appointed. Others are in the process of being appointed.

We intend to set up a Speakers' Bureau, and we will furnish speakers to any groups, Rotary Clubs or any other clubs, and these will be mixtures of doctors who are interested and who would like to talk on the subject, as well as other interested individuals. We have a couple of excellent ministers who want to speak on the subject. We have a great many people who are willing to put forth their sincere efforts to combat socialized medicine.

Dr. Frederick T. Hill is the Vice President of the Health Council of Maine and that Council has access to every paper in the State of Maine. We already have lined up 800 drug stores, which will be used as places for pamphlet distribution; pamphlets will be mailed each month to them.

We also have coöperating appointments from the Dental Society and from the druggists, and two of the live-wire druggists are now working through Dr. Hill and his Health

Council and the other Public Relations men. We are going to have an excellent program, and I am sure that if this thing goes on, as it is now headed, anybody who comes in here to sell the idea of compulsory health insurance is going to be confronted with an enlightened public.

We are not out to give any misconceptions, or anything else. We believe that we have a product to sell, and we believe that on the representation of the facts, we will sell the goods.

Some people, particularly Mr. Ewing and his brand of socializers, handle the facts very loosely; they are a group of people who are devoted to socialism *per se*, and who will put us all there, unless we are willing to combat it.

Now, this thing cannot possibly go over, unless every man in the State is willing to help. Each individual doctor must be a public relations man. We have got to be courteous to our patients, and on the road, also, with our cars. There are many things that make us look not too good sometimes, and that will not only lose us patients, but also the rooters for the compulsory program will be glad to know of such things.

This Committee is glad to have and will welcome suggestions from any member of the State. I, as Chairman of the Committee, hope that the work will be done to the satisfaction of everybody. If anybody has an idea or if anybody knows of a speaker, lay, medical or otherwise, who is interested, sincerely, to go out and talk to groups of all kinds, I should like to have their names, for we will be pleased to use such people.

We will be grateful for any suggestions that you may have.

We will, from time to time, have an article in the JOURNAL, which will tell about our meetings, when we will have the meetings, and we will welcome any member of the State Society to come and we only hope that we are able to organize everybody and everything to your satisfaction, to the benefit of the men in the profession.

If there are any questions, I should like to answer them now.

CHAIRMAN GOODWIN: Thank you very much, Dr. Vickers.

At this time, I think that we would like to hear from Dr. Drake as to the progress of the Voluntary Insurance programs.

DR. EUGENE H. DRAKE: Mr. President and Delegates. As Harold Jameson has already told you, there have been policies submitted by five insurance companies to the Health Insurance Committee and they have been accepted. Those Companies are the Aetna, Paul Revere, Equitable, Continental Casualty of Chicago and the American Policyholders Association.

Four of those five companies plan to sell group insurance in large manufacturing establishments, to large employers.

The Continental Casualty of Chicago plans to attempt, as they have in Rhode Island and Tennessee, to sell to communities, going into a community and trying to sell the whole community.

We have one more policy from a company that has not been acted upon as yet by the Committee.

The community selling insurance company plans to start operations in York County at once. They planned, originally, to begin selling the insurance June 1st, but because of a delay in getting the promotional literature out, they were held up, and probably will start within a week, and the first two counties of York and Cumberland will be canvassed.

In May, after the Committee had approved these policies, we had 38 per cent of the doctors enrolled in Maine, and a follow-up letter was sent out to all of the members of the State Association who had not given us the agreement, or who had not filled out the agreement certificates; we now have 52 2/3 per cent of the doctors in Maine who will agree to participate in the plan.

QUESTION: Do I understand that the insurance companies plan to make an active sales campaign, and not merely a passive one, and that the insurance agents will seek these people out and sell it like they do other insurance?

DR. DRAKE: Four of the five insurance companies are going to sell their insurance in groups, such as the Blue Cross has been sold, by going into a factory and trying to sell the whole factory.

As you know, a good many of our manufacturers in Maine already supply that insurance.

The fifth company plans to go into the communities and put on an advertising campaign over the radio and in the newspapers in order to get the people to go and talk to them and in order to sell all of them, if they can. They give them no physical examination. This particular company asks them three questions:

What illnesses have you ever had?

What sicknesses have you had in the last five years?

Do you now consider yourself well?

Those are the three questions the people are asked to answer.

DR. P. L. B. EBBETT: We have no factories in our community, so that it would have to be the whole community.

DR. DRAKE: The Committee feels favorable toward the community type of insurance. We have had it in our minds right along, that there should be some way of reaching the rural and the farm population who, as a matter of fact, have not too much hospital insurance, and this looks to us like a way, perhaps, to accomplish that.

Our Advisory Committee of insurance experts, some of whom are on the staff of insurance companies who just sell the group insurance, have all advised us to look favorably on this type of insurance. They think that it might help to answer our problems in Maine, where we have a big, rural community and have a good many people self-employed.

Now, that insurance would cost a little more, and it is quite obvious why it should. For one thing, nobody is going to collect the premiums, the way they do if you work for the Saco-Lowell Shops, for instance. Every month, the insurance company has to collect the premiums. And, the additional cost will be great. For example, their premium, for a worker and his family, including medical care and hospital care, will be \$3.00 a month, instead of \$2.75.

DR. FOSTER: Dr. Drake, did you state what percentage of a community would be necessary to have in order that that type of policy be effective? Is there any percentage?

DR. DRAKE: I don't know that there is. They hope to be able to insure 75 per cent of a community.

QUESTION: Let us say that individual takes out a policy. Can he get it through his local insurance agents, now?

DR. DRAKE: I doubt if he can, right now. But, this organization is a state-wide one, and they plan to cover the whole state.

QUESTION: But, ultimately, will he be able to buy it, like carrying other types of insurance?

DR. DRAKE: Yes, I think he will.

CHAIRMAN GOODWIN: Thank you very much, Dr. Drake.

We have a Delegate here from the Massachusetts Medical Society, and I am going to call upon Dr. Samuel Proger of the New England Medical Centre at this time.

DR. SAMUEL PROGER: Thank you very much, Mr. Chairman. I do not have any report to make. I am just here, officially, as a Delegate from the Massachusetts Medical Society, to extend to this group of Delegates the greetings of the Massachusetts Medical Society. Having done so, I have fulfilled my mission. I understand that, technically, that was to have been done tomorrow, but since I was in the neighborhood today, and cannot be here tomorrow, I hope this is all right.

It is always a pleasure to be here, and I am particularly happy to see a lot of restful doctors here, despite this hot weather. Certainly, nobody could look more relaxed than Dr. Jameson! [Applause]

CHAIRMAN GOODWIN: Thank you very much, Dr. Proger.



At this time, I want to appoint a Committee on Resolutions, consisting of Dr. Small, as Chairman, Dr. Ebbett, Dr. Webber and Dr. Frank Smith. This Committee is to draw up a resolution, endorsing the American Medical Association's Health Program, and this resolution is to be sent in to the Representatives and Senators from the State of Maine, and also to the President of the United States. This Committee will report to this House of Delegates tomorrow afternoon.

This meeting is now open for any business that any one wishes to bring up at this time.

DR. FRANK SMITH: I don't know whether this should come up under the heading of new business or not. But, I have always felt very enthusiastic about this organization, and my wife feels the same way about it, because we think that we meet with the finest people in the State, and people we never see at any other time during the year. So why shouldn't we be enthusiastic about the things that touch our lives more closely than anything else?

As I came in here, I saw two men who have been coming here for years. They have served in different capacities, in the Maine Medical Association. They haven't lost their interest, and they still keep coming.

Now, in the new Constitution, I don't know whether it is going to provide for the number of meetings that the Council should hold during the year or not; but, it seems to me that there is plenty of work for the Council to meet nine times a year.

Now, I just want to say that it is awfully discouraging to me, for this reason. I am a delegate from Cumberland County, and yet we don't know what is going to come up here for action. We have talked, in the past, about having a meeting of the House of Delegates during the year. If we can't get the whole House of Delegates together, why not get the Chairman of the Delegates from each county, and have them meet sometime before this meeting?

Also, why can't we get more information by having the Councilor from each District meet with the Delegates, at least two weeks prior to this meeting. I think that there is a lot more that we can do.

I know that we have a number of Chairmen of Committees, who have worked mighty hard. I happen to be on two Committees, and I want to tell you, the way that Gene Drake worked on this Medical Care Plan Committee and the hours that he has put in and the energy that he has had, well, I just don't think that we, as an Association, were in back of him enough to put it across the way it should be put across.

Certainly, we ought to be on the offensive, for there have been resolutions at Augusta, where the doctors have been vigorously scored for their failure to participate in a surgical benefit plan in Maine.

Well, now, are we ready to come back strong on this? I don't believe we are.

I think that if this House of Delegates met more often, it could ask for and get more information, and it could better disseminate this information among the doctors as a whole, all over the State.

It seems to me, too, that something ought to be done before we leave Poland Spring, about this matter. Nothing will hurt our organization more, and nothing will reduce the efficiency of the people who are working for this organization more than to hear rumors which are not so. I have heard some nasty ones recently. And, I think that those things ought to be squelched, or that some action should be taken otherwise. It isn't fair, and we should do something about it.

Perhaps if a delegate from each Councilor District met with the Council, we could stop this sort of thing. It isn't courteous; it isn't kindly; it isn't decent, and it isn't for the benefit of our Association. And, that is what we ought to be working for.

Then, you will hear: "I am perfectly well satisfied with the \$35.00 per year dues; but, why not take up the possibility or the impossibility of economies in the running of our Maine Medical Association, and settling that, once and for all? Either it can't be done any cheaper, or it can be reduced a little."

Well, now, I don't know; these might be small things to

you, but, to me, this has been the greatest Association that I have ever been connected with, and I would like to see the little things taken care of because they all make up the sum-total.

For instance, let us take the matter of the attendant nursing situation and the work that Clyde Swett did on that matter. It didn't go through. The fact of the matter is that we were not as solidly behind this as we should have been. We should have been more interested to see that our hospitals get the proper amount for the care of State aid patients, too.

Mr. Chairman, I really think that we can do a lot more, and have more interest in these things, and I would like to see some discussion on this matter. [Applause]

CHAIRMAN GOODWIN: Thank you, Dr. Smith. Is there any discussion on Dr. Smith's suggestion?

DR. JAMES H. CROWE: If I remember correctly, at Lewiston a few years ago at the Fall Meeting, something similar to what Dr. Smith suggested was discussed, and it seems to me that we were to receive a notice of all of the business matters that were to be brought up for action at the House of Delegates' meetings. I have never received anything like that, such as what has been discussed in the Council meetings, etc. I think that that was voted upon and passed at that time, at Lewiston.

CHAIRMAN GOODWIN: I would have to look up the records to find out what the decision was, but I think the Secretary understood that it was to be a detailed report of the Annual Budget that was to be sent out. I don't know whether it was voted to send a report of the detailed business of the Council at that time or not. Can anybody inform me?

SECRETARY CARTER: I don't think it was.

CHAIRMAN GOODWIN: It was decided by the President-Elect and the Secretary at that time, that a detailed report of Budget expenditures should be sent out, and I think that it was. But, if more material is desired, I am sure that it could be sent to you, also.

DR. CROWE: I meant the business coming up. We don't know what our societies at home would like to have us do on some of this stuff. Oftentimes the Councilor, himself, can't get to our meetings, before this meeting of the House of Delegates.

If we had some inkling of what was going to be discussed in the way of business matters, we could talk it over with our societies back home.

CHAIRMAN GOODWIN: Would you like to make a motion that the details of the business for the coming annual meeting be sent out, along with the details of the budget? If you wish to do that, I think the assembly would entertain such a motion.

DR. CROWE: Yes; I will make that in the form of a motion, that the proposed business that may be discussed in the House of Delegates be sent to each and every delegate, I assume before the meeting.

CHAIRMAN GOODWIN: It has been moved that it is the desire of the House of Delegates to have a detailed report of the business to come before the Annual Meeting sent to each Delegate at least two or three weeks previous to the annual meeting, along with the Budget. Do I hear a second to that motion?

DR. CLYDE I. SWETT: It might cause a little bit of confusion, if the motion went through in that way. Many of our County Societies don't hold their meetings until the latter part of May. Many times, it is the year for the election of Delegates and the Delegates are not known until that time.

Therefore, unless the material could be in the hands of the County Societies or the County Society Secretaries prior to the Annual Meeting of the Societies, it would be haphazard. In order for the Delegates to have an opportunity to present these matters to their own Societies, it would seem to me that this report should have a deadline, such as the last of April, let us say, giving sufficient time for the Societies to consider properly and maybe take the matters up with their own Councilors.

CHAIRMAN GOODWIN: I think that most of the new business probably will come from Delegates from all over the State. The Council carries on more or less the administrative work. The new business that comes before it, other than the



budget, must come from the grass roots members of the County Societies, who make up this organization.

If you Delegates would send in, in time, the business that you would like to take up or propose, so that it can be sent out in April, I am sure it can be done then as well as any other time.

We are glad to hear how you feel about this, today. I think that if you have anything two or three months previous to the Annual Meeting that you feel is new business that should be taken up, you should write that information to our Secretary, and it will be taken up by the Council and also at the House of Delegates' meeting, and we will send the Delegates this information the last of April, practically two months before the Annual Meeting.

DR. CHARLES W. KINGHORN: I would like to suggest that the Council consider the dates of their meetings a little more carefully. They took our Councilor away from us, when they had a meeting the same day we had ours. So Dr. Drake had to go there. Now, we have our meetings regularly on the second Wednesday of the month, year in and year out, and everybody in the State office gets a notice of our meeting. They could let us alone and let us have our meetings.

CHAIRMAN GOODWIN: That is a good point.

DR. THOMAS A. FOSTER: I should like to support Dr. Smith's principles. Sometime ago this assembly voted to have a mid-winter meeting of the House of Delegates, but during the war it didn't effectuate. It may not be necessary to have a meeting of the Delegates, but more and more business is certainly coming before doctors, outside of their professional work. There are new committees, such as the Committee on the Practice of Medicine and Hospitals, the Committee on Emergency Medical Service, Committee on Veterans' Affairs, and there are many committees which could well meet during the year and accomplish a good deal.

Now, if it isn't feasible to have a meeting of the House of Delegates, would it be possible to have the County Secretaries, sometime during the winter, be advised of the matters that might come up.

It does seem to me that more and more work is piling up and more and more opportunity presents itself to the doctors for calling more and more meetings.

CHAIRMAN GOODWIN: Is there any further discussion of the motion before the House?

DR. CARL E. RICHARDS: As far as I can see, the motion is of very little value, as it is now. The new business is practically unknown until we get here. I am in hearty agreement with Dr. Smith's criticism and suggestions. It seems to me that the problem is a lot bigger than a little motion that we have here.

I should think that we ought to spend some time here in the next two days, trying to remedy these defects, and I would suggest some sort of a Committee be appointed and spend some time looking into the matter, and seeing if there isn't some way that some information might be made available to us, so as to establish some enthusiasm.

CHAIRMAN GOODWIN: Is there any further discussion?

DR. FRANK SMITH: Mr. Chairman, there is no question about it, but the Delegates have been aching to do something. I have been here for many years, when they didn't have a thing to do. I say that is wrong. We are getting a new crop of medical men in the State, and they are coming in fast during the last few years, the finest type of men on the face of God's earth; they are mighty capable. I want them to feel that this organization is something worthy of support and I want them to get enthusiastic about it.

I can't see any objection to having a meeting, at least of the Delegates, in April or sometime around that time, because then we ought to have more information from the county societies. The Delegates have got to have something to work on, if they are going to keep up their interest.

DR. CROWE: I think at that Fall Clinical Session at Lewiston, the House of Delegates felt quite good about it, when we got through. Now, it seems to me that there is a long time between meetings. I know that the Council carries on in the meantime, but I believe that at least twice a year, the Delegates could get together and iron out any problems.

I would be in favor of having the policy of the House of Delegates to have a Fall Session.

CHAIRMAN GOODWIN: Is there any further discussion?

DR. FOSTER: Would you state the motion again, please?

CHAIRMAN GOODWIN: It has been moved that the delegates from each section be notified sometime previous, and no definite date has been set in the motion, but sometime previous to the annual meeting, giving them the details of the new business that is to come up. I think that motion came originally from Dr. Crowe.

There are also suggestions, not motions, that have been made. Now, if you wish to refer this to a Committee for detailed organization of the motion, you can at this time refer it to a Committee for further study, or, you can pass this motion as it was given.

DR. ERVIN A. CENTER: Do we have a Steering Committee?

CHAIRMAN GOODWIN: We haven't an established Steering Committee at the present time. But, this motion can be referred to a special committee, for detailed recommendations, and then brought to the House of Delegates tomorrow afternoon.

DR. CENTER: Then I move that this matter be referred to the Reference Committee.

DR. FRANK SMITH: Isn't that the same Committee that we referred things to last year?

CHAIRMAN GOODWIN: Yes.

A MEMBER: Could an amendment be made to the motion before it is passed, to the effect that the meeting might be held in the month of April, whereby the matters might be discussed by the House, and then taken back to the local societies before the Annual Meeting?

CHAIRMAN GOODWIN: The Reference Committee will discuss with you men what you want and draw up a motion to be made tomorrow, which will designate the time of the meeting, or whatever your wishes may be. As I understand the motion now, this matter is referred to the Reference Committee for drawing up a motion in detail for tomorrow afternoon's session.

DR. FOSTER: When will they meet? Who are they?

CHAIRMAN GOODWIN: The names of the men on the Reference Committee are: Foster C. Small, P. L. B. Ebbett, Franklin Ferguson, C. W. Kinghorn, and I will ask Frank Smith to sit in with that Committee. If there is anybody else you wish on this Committee, I will nominate two more.

DR. STEPHEN A. COBB: Make it a mandatory meeting of the House of Delegates. It ought to be inculcated in the by-laws, if they are revised, and changed, regarding this Fall Session, or whenever it is going to be.

DR. FRANK SMITH: Mr. Chairman, I will ask Dr. Foster if there was any time designated prior to the war or during the war.

DR. FOSTER: I believe it was to be a mid-winter meeting.

CHAIRMAN GOODWIN: The details of the meeting, whether it is to be in April or during the Fall Clinical Session, will be discussed by the Reference Committee.

DR. CROWE: I will withdraw my original motion, in favor of the motion to refer this matter to the Reference Committee.

CHAIRMAN GOODWIN: The motion that is now before the House is to refer this matter to the Reference Committee for further study, to be reported back to the House of Delegates tomorrow afternoon at five o'clock, for action. I think I will add Dr. Crowe's name to the Reference Committee for the consideration of this matter.

Is there further discussion?

[The question was then called for.]

CHAIRMAN GOODWIN: All those who are in favor of the motion to refer this matter to the Reference Committee, to be reported back to this House tomorrow afternoon, will please signify by saying "aye." Those opposed?

*There was a chorus of "ayes" and the motion was carried.*

DR. FOSTER: If a delegate is to be heard, he ought to know where and what time the Reference Committee is going to have its meeting.



DR. FOSTER C. SMALL: I should say, the sooner the better. I will be glad to entertain any member of the House of Delegates in Room 209, at six o'clock this evening.

CHAIRMAN GOODWIN: Is there any new business to come before the meeting?

DR. ROBERT W. BELKNAP: I have two resolutions that the Lincoln-Sagadahoc Society has asked me to bring before this meeting:

RESOLVED: That the Maine Medical Association and its constituent members refuse to cooperate with the government sponsors of a medical plan.

Secondly; that the Maine Medical Association, through its Committee on Legislation, sponsor a bill for compulsory anti-smallpox vaccination.

DR. FOSTER: Could that be referred to the Reference Committee, also?

DR. BELKNAP: I would be willing for the Reference Committee to frame a motion along that line, and I, therefore, move, that these matters be referred to the Reference Committee.

*This motion* was duly seconded and was carried.

CHAIRMAN GOODWIN: Is there any further business to come before the meeting?

DR. P. L. B. EBBETT: At the Aroostook County Society meeting last October, we took up the question of fees for medical examinations for the insurance companies, and those fees, I believe, had not been revised for twenty years or more. We have increased the other fees. On an office examination, we charge from \$3.00 to \$5.00, depending upon what we do in our examination. We do an insurance examination for the old line companies for \$5.00; we have to make a complete report, sending it in to them. It takes considerable time, and more than we usually spend on a regular examination.

After considerable discussion, we decided that we should increase the fees of all insurance examinations 50 per cent. In other words, if they paid \$5.00, then we should charge \$7.50; those paying \$3.00, it would be \$4.50. That is the fraternal insurance companies. And so on.

We discussed it thoroughly, and we tried to work it out. But, that was supposed to go into effect on November 15, 1948.

Now, if I may say this: Four or five of the insurance companies immediately accepted that increase in fees and said it was all right, and agreed to stand by them. But, more of the companies said that it was exorbitant and refused to pay the fee. The result was, as in most other matters, they went around and got other examiners to do it for less.

Now, we felt that we would like to know how this appeals to the Maine Medical Association, and whether they feel that it should be State-wide movement.

I don't think that the fees are enough, and I don't think that we will find any difficulty in getting them to pay more. I know that when we got the other increase, many of the companies started in, voluntarily, and gave us \$5.00 when the others were paying \$3.00; the others then came up to \$5.00. And so I feel that if we said it was going to be \$7.50 for an old line examination, there is no doubt but that they would come across.

Now, I don't know how you feel about it, but we do feel that to make it a success, it should be a state-wide movement. We intend to stick by our guns and keep the fees up to that price. If the rest of you want to go along with us, all right.

I should like to have the sentiment of the meeting on that point.

CHAIRMAN GOODWIN: Thank you, Dr. Ebbett. Do you want to have this discussed at this time, or do you want to refer it to the Reference Committee?

DR. EBBETT: I should like to have it discussed now.

DR. FOSTER: A similar resolution was introduced in New Jersey, and Frank Dickinson, who has made a study of the situation, finds that there is no insurance association with which to negotiate on a nation-wide basis for fees. The insurance companies say that there is some legal complication, something to do with monopolies, or anti-trust laws, and they have no organization, as insurance companies, with which the

A. M. A. can go to in order to revise insurance fees upward.

The Reference Committee of the A. M. A. brought in a report, including Dr. Dickinson's study, and recommended that the report be sent to the Secretary of each constituent society. Our Secretary will receive a Dickinson report and a report of the Reference Committee, because they will be sent to all of the State Societies, with the hope that the Societies can review the report and work toward an upward revision of the insurance fees. It has been done, apparently, on an individual basis.

DR. SWETT: As Secretary of our county society, I received a great many letters in answer to a form letter which I sent out to the various companies operating in our county. As Dr. Ebbett told you, some of them immediately were in accord with our sentiments, and others had various reasons as to why they felt they should not want to go along with us. Still others told us that there was already a group on a national basis that were studying this problem, and felt that something should be done by the insurance groups, and that pending the report of this investigation, they would wait before making any decision as to what their individual companies would do.

It is true that there isn't any national association that we could go to. We found that to be true, also, with reference to our prepaid medical care.

DR. FRANK SMITH: I move that we go on record as raising the rates of these insurance companies. Everything else has gone up.

DR. KINGHORN: Is this for people taking out insurance, or for people injured?

DR. EBBETT: These are the medical insurance examinations for life insurance. The increase we advise is 50 per cent, in the examining fees.

The motion was then duly seconded.

CHAIRMAN GOODWIN: A motion has been made and seconded, supporting the advance in fees for the medical life insurance examinations. I await further discussion.

DR. KINGHORN: How much?

CHAIRMAN GOODWIN: This is a serious matter. If this Association goes on record as being in favor of this, and you go back home and do your examinations for \$5.00, the same as you always have done, it won't look too well for us. So that I think it is a matter that is very serious for the Society, and that we should have further light on this matter. You want to mean what you say, when you say it. A great many of you are affiliated with many of the companies. Are you going to stop, suddenly, and say: "I am bound by a regulation of the Maine Medical Association, for \$7.50 for these examinations."

DR. SWETT: All the Society is doing, by the motion, is giving its endorsement to such an increase in fees.

I do think that there should be an amendment to the motion, recommending that this endorsement be sent back to the individual county societies, for their own decision in the matter. In that way, the doctors will not feel that they have been railroaded through something that they may not want, because it was popped on the delegates today.

I feel that this matter should be taken up by each and every one of the county societies; although it is all right for us to favor such a program, I would like to make the recommendation that we endorse the increased medical examination fees, and that the matter be referred back to the county societies for their own decisions. I move that as an amendment to the motion.

A DELEGATE: I took action on this two years ago. I found out that the agent was more enthusiastic than the applicant, and 50 per cent of them broke their appointments, so I decided that it was too expensive to try to do those examinations.

DR. FRANK SMITH: Many of our young medical men going into general practice will not do the examinations; yet, we ought to have that type of man examining them, because of the small fee there is in it. I know a number of them who won't do it.

DR. FOSTER: I will second the amendment.

CHAIRMAN GOODWIN: The amendment to the motion is

before the House. Do you wish to withdraw your motion and accept the amendment?

DR. EBBETT: Yes.

DR. SWETT: I move, then, that the State Association approve the program for increasing medical examination insurance fees by 50 per cent, and that the definite action be taken by referring back to the local county societies for them to decide. Perhaps that is not worded just right, but that is the idea of it.

DR. FOSTER: I will second the motion.

CHAIRMAN GOODWIN: Is there any further discussion?

DR. CENTER: This has been slapped at me at a moment's notice all right. It is a big problem. I also think that it is one that could have a lot of ramifications. It would seem to me that it is something that we ought to think about for at least a few hours, and then maybe come in with a well-worded motion which may be more adequate to cover the situation and get what we want; otherwise, we might get ourselves into something we couldn't finish here today.

I think that it would be wise to postpone action on this matter, also, until tomorrow; in the meantime we can think it over and sleep on it.

DR. FOSTER: May I ask Dr. Swett if he will accept an amendment to the amendment, that the County Society Secretaries, after studying the Dickinson report, which will be sent to them by Dr. Lull, report on their reactions as to the revision of the fees upwards, and give us their recommendations after studying the matter, in regard to the revision of the fees, upwards. If you spend time on that report and the data, I think that you might find a conclusion.

DR. CENTER: I think that it should be a state-wide proposition. If one county adopts it, some of us living on the county line will get the repercussions back and forth from the insurance companies. I know that I can throw a stone to my county line.

And again, as to what Dr. Smith said before, this is something that could properly come up for action at a fall meeting of the House of Delegates, if the Reference Committee recommends such a fall meeting tomorrow afternoon.

DR. RICHARDS: The original motion did not mention any specific increase. But, when it was re-stated, you put in an increase of 50 per cent.

DR. JAMESON: It doesn't seem to me that as a rule the State Association puts itself down pat very much in the matter of fees. I think that that is pretty much a matter of something that is up to the individual. If the individual does not want to do an examination for \$5.00, why doesn't he pass it up?

I don't think that the insurance companies would like the idea of the State Association passing a vote or a resolution to revise their fees upwards, to \$7.50. I also think that they will find plenty of people to do those examinations for \$5.00.

I don't think that we have any particular control over these prices. It seems to me that it is fairly futile to pass such a resolution today.

DR. CENTER: I move that the matter be laid on the table.

This motion was duly seconded by several present.

DR. KINGHORN: Why don't we do something or do nothing about it? If we put it off until tomorrow, we will do the same thing over again.

CHAIRMAN GOODWIN: Is there any further discussion?

DR. CENTER: Mr. Chairman, a motion to lay on the table is not debatable.

CHAIRMAN GOODWIN: You are correct. All those who are in favor of laying this matter of insurance examination fees on the table will please signify by saying "aye." Those opposed?

There was a chorus of "ayes," with four dissenting votes, and the motion was carried.

CHAIRMAN GOODWIN: As over two-thirds of those present were in favor of laying this matter on the table, I declare the motion carried.

Is there any other business to come before this meeting?

DR. SWETT: This is an unofficial presentation, but the Board of Registration in Medicine is deeply concerned in this

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*While we talked, I thought of how Chicken Pox is a lot like other "diseases"—diseases of the character, such as intolerance, self-righteousness or just plain ignorance. They're excusable in children, but when they come out in adults they're ten times as bad—and can be mighty "contagious."*

From where I sit, we should all watch out for the "symptoms"—little things like criticising a person's preference for a friendly glass of temperate beer or ale. We've seen freedom wither away in other countries, when individual intolerance was allowed to get out of hand and become a nationwide epidemic.

Joe Marsh



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State, over trying to keep track of irregulars who are practicing medicine. There doesn't seem to be any good way that we can know what is going on in the various communities and what type of work the men are doing. For a six-man Board to cover this State would be a full-time job.

With that idea in mind, and I am not speaking officially for the Board, it is merely because the Board has asked me to investigate it during the next year, with an idea of trying to produce some method that might be satisfactory to the Board and to the doctors in the State to have a better check-up.

Now, the way that we are thinking that this might be done, would be to have registration on a yearly basis to the Board of Registration in Medicine, with maybe an annual fee, of \$1.00, with your registration certificate; in that way, we know who you are, whether you are alive or dead, how old you are, why you are practicing, and whether you have a right to practice.

It seems simple, from the standpoint of coöperation.

I should like to have an expression of opinion from the Delegates, or, I would even be willing to have this turned over to the Reference Committee; it would help us tremendously in what we want to do during the next year or two.

CHAIRMAN GOODWIN: Is there any discussion on this matter?

DR. SWETT: As there is no discussion, I will assume that they are in accord, and a more detailed and complete report will be given to you at a future date.

CHAIRMAN GOODWIN: This will mean just one more dollar check to fill out, along with the narcotic blank.

Is there any further business to come up under the subject of new business?

I am still in doubt about Dr. Cobb's suggestion, and I don't wish to leave out anything that he wishes to put before the meeting.

DR. STEPHEN COBB: I may say that we are having a meeting later on tonight of the Committee on the Revision of the Constitution and By-Laws, and these recommendations will be presented at the meeting tomorrow. Of course, they will be too long to read, but I will tell you at this time that the recommendations will be mimeographed and sent to every doctor in the State, and they will have to lie on the table all next year, that is, until next June, for action.

I did think that if we could get a hint as to something that might be coming up at tomorrow's meeting, we might put it in the revision as presented tomorrow.

I might say for your benefit and for things to think about, that Mr. Locke and Mr. Payson have spent sometime on this revision; they have sent these out to all of the members of the Committee, and quite a number of changes have been made.

It is time that we incorporated, and if we do incorporate, for the benefit of you men, the name of the Association should be changed to that of "Society."

Also, there is the fact that the membership thing was straightened out here today, of course, but some of the different county societies have brought up matters regarding associate members, honorary members and active membership in the society.

It was also thought that with the economic set-up as it is in the country, it would be a good idea if we had our Delegate to the A. M. A. sit in with the Council at its various sessions.

Those are a few of the things that will be coming up, which will be a part of the report presented tomorrow.

CHAIRMAN GOODWIN: Thank you, Dr. Cobb.

Is there any further business to come before the meeting today? If not, a motion to adjourn is in order.

Upon motion duly made and seconded, it was

VOTED: To adjourn.

[Whereupon, the First Meeting of the House of Delegates of the Maine Medical Association was adjourned at 5:50 o'clock p. m. on Sunday, June 19, 1949.]

*To be continued in the November issue.*



# The Journal of the Maine Medical Association

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## THE GOVERNMENT'S RESPONSIBILITY FOR THE HEALTH OF ITS CITIZENS\*

JOSEPH S. LAWRENCE, M. D., Director, Washington Office, American Medical Association

No Congress, it may be safely stated, ever had brought before it so many bills relating to the public health and welfare of the individual as are already before the 81st Congress. The 79th Congress had about 75 bills, and the 80th Congress considered a few more than 200 such bills. There are now 226 bills of this character before the 81st Congress which has not yet completed its first session. Fifty-three of these were introduced in the Senate and 173 in the House. Of this number, 16 relate to health insurance and about 60 to social security.

Some of these bills have been before earlier Congresses and are about ready for enactment into law. Among them is a bill that would establish a National Science Foundation under which all research activities (including medical research) would be coördinated. The Senate has acted favorably upon this bill, and I understand the House is prepared to enact a similar bill of its own. Authority for creating County Health Units has been considered by several Congresses and has finally reached a form in which it will very likely be enacted. It provides that the federal government shall assist the states with a substantial subsidy in organizing and establishing county or district health units. An amendment to the Hospital Construction Act (Hill-Burton Act), extending

the period in which construction may be undertaken and increasing the amount of available federal funds, is receiving favorable consideration.

There are four bills that propose a national health program. One is sponsored by the Administration, S. 1679, the compulsory provisions of which, I am certain, are more or less familiar to you all. Another bill, S. 1681, was introduced by Senators Taft, Smith of New Jersey, and Donnell and is a modification of S. 545 which was before the last Congress. It differs from the Administration bill in certain important particulars. It is not a compulsory measure, but instead provides that federal funds may be made available to the states for developing their own programs. The Administration bill provides that the states develop a plan, but it reposes considerable authority with regard to the administration of the plan with the Federal Security Agency. The Taft-Smith-Donnell bill, on the other hand, creates a separate agency under which would be concentrated all federal health activities, but leaves the states almost complete autonomy in the development and administration of their plans. A third bill, S. 1456, introduced by Senators Hill, O'Connor, Withers, Aiken, and Morse, has no compulsory feature but provides that all treatments must be furnished in a hospital. It especially recognizes the existence of the voluntary prepayment plans and offers a way by which the federal government can

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\* Presented at the 95th Annual Meeting of the Maine Medical Association, June, 1949.



join with states or communities in developing prepayment plans so as to make them available to all the population. Even the indigent may benefit under these plans by having the government pay their premiums. The fourth bill, S. 1970, was recently introduced by Senators Flanders and Ives and similar bills were introduced in the House by Congressmen Hale, Herter, Javits, Case, Nixon, Morton, and Fulton. There is no compulsory feature in this bill either. It also concentrates on the development of the existing voluntary prepayment plans, directing attention particularly to the development of programs by coöperatives.

It provides that the payments made by individuals shall be scaled to their incomes. Absolute freedom is allowed patients, doctors and hospitals to decide whether or not they wish to join the plan. For purposes of administration, the states will be divided into regions and districts and advisory groups will have authority in each, but no physician or person engaged in dispensing health services will be eligible for membership on these committees. The deviation from the compulsory type, shown in these bills, may be indicative of a change in public sentiment. We hope it is.

Compulsory insurance has a history. Daniel Defoe, the author of "Robinson Crusoe," in his "Essay on Projects" outlined a scheme of compulsory insurance for laboring people. He proposed that in every country a public authority should be established where laboring people should register, pay an entrance fee of sixpence and a quarterly fee of one shilling and in return receive certain benefits. He was confident that his scheme would secure the country against beggars, parish poor, almshouses, and hospitals, under which none should be so miserable or so poor but should claim subsistence as their due and not ask it of charity. But experience disabused him, and he finally reluctantly concluded that "some men have less prudence than the brutes." A few years later, 1786, John Acland published a pamphlet on compulsory insurance which attracted considerable attention, and a bill based on his plan was introduced in the House of Commons in 1787. Other attempts at solving the problem of caring for the less fortunate and indigent by means of contributions, voluntary and compulsory, have been made, but they were all short-lived until Bismarck established his system in Germany. They failed largely because the compulsion applied only to the payment of the contribution or tax. Penalties cannot be successfully imposed on people for neglecting their health except when suffering with quarantinable diseases.

Let us look at the compulsory feature of the Administration bill. It requires a deduction from every man's wages or earnings without exemption to a top limitation of \$4,800. In the income tax, the low wage earner is favored. There are several exemptions that he can benefit from, but in this scheme only the wealthy are favored with exemption from taxation

of all income in excess of \$4,800. It might well be called the "poor man's tax." In the other three bills, the contribution, as you will recall, is not compulsory. A man uses his judgment both as to whether he wishes to join and as to the amount of his contribution.

In all of these bills the public and profession would seem to be protected against arbitrary government administration by the creation of numerous advisory councils and controlling committees, but can such advisory bodies realize all that is expected of them? Their members are selected by the chief administrator, not elected by the people, and their chief qualification is that they have impressed the selector that they see the subject as he does. It is inconceivable that a committeeman would be selected if he were known to entertain varying ideas. The committeeman, coming from a busy life, cannot give his whole time to the affairs of the committee and will rely on the full-time government employee to prepare the agenda for the committee's consideration. The agenda may or may not be submitted to the committee members prior to the meeting. If it is, he may discuss the subjects with his associates; but if he sees it for the first time when he comes to the meeting, his opportunity of securing a broad view of the matter is limited. The time of the committee meeting is limited too, so that only items that are considered most important by the chairman will be on the agenda. All other decisions will be made by the chairman and his staff at their convenience. Regulations and directives that they thus prepare and put into effect will in time have the full effect of law.

Compare the public manner in which a law is enacted in Congress: The measure is proposed to Congress, printed copies are available to every interested person, a committee considers the proposition and invites the public to argue for and against its provisions, the testimony is printed and distributed. The members of the considering committees are always approachable to the public. If the committee favors the bill, it is brought before the respective house and may be debated for days before final action is taken. Similar procedure must be followed in the other House and finally the President must affix his signature.

Committee regulations are printed in the "Federal Register" in advance of their taking effect, and it is sometimes possible for an interested person to secure permission to present his views to the committee before it acts, but in order to do so he must know when the committee will meet and what subjects are to be considered. Many organizations have found it advantageous and necessary to establish an office in Washington with an adequate staff whose function is to keep the organization informed on what the bureaus and executive administrators are planning for their respective fields. Bureaucratic lobbying,

euphemistically called public relations, is rapidly growing to be more important than Congressional lobbying.

Another feature of the Administration bill that should be considered is that it promises all of its contributors complete service, including home service, nursing, and hospital care. Because of a lack of adequate facilities, this can be only a promise for a number of years. In spite of a subsidized hospital building program, most communities find it impossible to accommodate the demand for hospital beds under present conditions. In other fields the government has exercised or asked for authority to exercise control over distribution of a product when its production or the supply is limited. In this instance the limited availability of medical facilities is well known, and if the financial controls were removed, the resulting confusion and disappointment can readily be visualized.

Proponents of the Administration bill are objecting to its being called a socializing measure. Perhaps they are correct and it should more deservedly be called a monopolizing measure. Certainly the federal government will be obliged, whether it chooses or not, to exercise far-reaching control over the activities of physicians, hospitals, and the patients as well. Is our present system so defective and so lacking in vision that we must sacrifice portions of our liberty in order to set up a government monopoly? A monopoly whose bureaucracy would reach into every district, hamlet, and home in the country and would far surpass in employed personnel any existing government activity? Why should we now ask the federal government to take over activities for which the community has always assumed full responsibility?

Isn't it because of the money subsidies which the federal government offers to the community?

Within the present generation many public spirited citizens, particularly those connected with welfare organizations, employing their private funds demonstrated to selected communities what might be done to the betterment of the people of the community if plans they devised were carried out, sometimes called "pump priming". Successful in these demonstrations, the agencies withdrew financial support when the community or state was persuaded to take an appropriate interest. Unfortunately, the government subsidies instead of developing an independent community interest have in many instances, on the contrary, encouraged an increased dependence upon outside assistance. Have we come to the stage where our communities and people are willing to barter their freedom and independence for federal funds?

How many people have given thought to the manner in which the federal government obtains its money with which it grants subsidies sought so eagerly by the states and the communities? According to a study made by Senator Bridges of the President's 1949 budget, the State of Maine is paying to the federal government as its share \$143,000,000 in this fiscal year, while its own state and community governments are costing only \$29,000,000 or one-fifth as much. Another study published by the Tax Foundation showed that in 1932, the federal government received 24% of the taxes collected in the states and the state and local governments received 76%; but in 1948 these figures had shifted so that the federal government collected 74% of the taxes, while the state received only 26%. Is it any wonder that the states have become beggars at the federal government table?

FEDERAL, STATE, AND LOCAL TAX COLLECTIONS FOR SELECTED YEARS  
(In Millions of Dollars)

Years	1932	%	1937	%	1942	%	1948	%
Federal .....	\$1,790	24.0	\$ 4,765	38.8	\$12,286	59.0	\$37,632	74.0
State .....	1,890	22.6	3,013	24.6	3,939	18.9	6,807	13.3
Local .....	4,468	53.4	4,481	36.6	4,589	22.1	6,498	12.7
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	\$8,148	100.0	\$12,259	100.0	\$20,814	100.0	\$50,937	100.0

Federal tax collections do not include miscellaneous receipts of the Federal Government nor payments to social security trust funds.

State collections include local shares of state-imposed taxes.

Local collections exclude shares of state-imposed taxes.

Source: *Facts and Figures*, published by the Tax Foundation, New York, N. Y.

It is variously estimated that the cost of the Administration's health program, which is not included in these figures, will be between \$6,000,000,000 and \$15,000,000,000 annually. Are we justified in such an expenditure? Health programs were never so

active nor so fruitful in this country, or in any country, as they have been here since the turn of the century and every indication is to the effect that they will continue to increase and expand. For example,

*Continued on page 320*



## THE MAINE STATE POLICE\*

COLONEL FRANCIS W. McCABE, Chief, State of Maine Police

Mr. Toastmaster, distinguished guests, members of the Maine Medico-Legal Society, ladies and gentlemen—It is a sincere pleasure for me to be here this afternoon with this particular group and I also regard this opportunity to speak on this program as an honor, especially when one notes the makeup of this group and the caliber of the qualified speakers to follow me on this program.

My subject today will be one which I hope you will deem as appropriate for this occasion. It is "Your Maine State Police."

The Maine State Police Force today constitutes an organization of 110 uniformed policemen and 35 civilian employees whose wide range of activity covers the broad areas from Kittery to Fort Kent and from the New Hampshire State border on the West to the rockbound Atlantic coastal region on the east.

In order that this group may properly function in its principal duties, to prevent crime, arrest and prosecute criminals, and preserve law and order in the State of Maine, it is mandatory that their field of work cover a wide range of activities and be exceptionally wide in its scope.

In order that the Maine State Police may perform their duties in this State, the organization is broken up, so that all activity stems from a general administrative source which is located at the Capitol City. In addition to this, there are six troop areas throughout the State, covering specific territory where the field activities take place.

Several Bureaus function from the Headquarters Administrative Building and they are:—The Highway Traffic and Safety Division, Communications Division, Motor Maintenance Division, and the Bureaus of Identification and Criminal Investigation. Today my discussion of the Maine State Police will cover the latter two Bureaus — Identification and Criminal Investigation.

The State Bureau of Identification was created by Legislative action in 1937. It was established, not as a State Police Bureau exclusively, but as a State Bureau whereby it was then and functions today as a central bureau of records, in order that positive identification of individuals through fingerprints may be provided, and which includes both criminal and personal files. This Bureau not only provides for the filing of fingerprints, but also, and equally as important, the assembling of each subject's complete criminal record. Whenever new arrest records are received they are immediately compared with the rec-

ords on file and all information relating thereto is submitted to other interested law enforcement agencies.

In addition, this Bureau is equipped with a photographic laboratory operated by members of the Maine State Police who have been specially trained in this most important field of police work. Our laboratory and dark room are partially equipped for mugging criminals, photographing ballistics, latent fingerprints and many other articles and substances. Equipment is also provided for photographing crime scenes and highway accidents. In a great many cases these photographs taken by our laboratory technicians, are enlarged and later presented as evidence in Court. However, we are not equipped at this time to handle all cases regarding ballistics nor handwriting cases submitted to our Bureau, but we in turn forward the same to the Federal Bureau of Investigation Laboratory in Washington, D. C. for analyses. Chemical analyses are performed by the State laboratories and I must state here that the coöperation we have received from this group is most worthy of the highest praise. Time after time we have called upon them for assistance in the past year and each and every time they have graciously responded. This splendid coöperation has also manifest itself in Federal, County and Municipal Law enforcement agencies and is greatly responsible for the Bureau's successful operation. In turn, we are most willing and ready at all times to render our services, in order to assist any and all enforcement agencies, at all levels of our government.

One of the finest examples of police investigation and identification on the part of the Maine State Police was made recently in a fatal death case that involved an individual supposedly hit by an automobile at Thomaston, Maine.

On March 9, 1949, at approximately 11:30 P. M., a dispatch was received at the Thomaston State Police Barracks stating that there had been a bad accident on the Owls Head Road. At 11:30 P. M., a notation was placed on the Barracks' blotter stating that the Rockland Police Department reports that a boy had been run over at about 11:00 P. M. and that this boy was approximately 14 years of age.

Early the following morning a dispatch was received by Headquarters from the Thomaston Barracks requesting a photographer to be sent to Thomaston in order to take several pictures of the scene of the fatal accident which had previously been reported. Our Headquarters' man, upon his arrival at Thomaston, was shown the car in question that involved the

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hit-and-run fatality and many pictures were taken in order to gain certain evidence that might be necessary for court action.

During the course of this examination, it was noticed that the bumper showed definite markings of some nature and that portions of the grill were missing; also, that the seal beam headlight was broken with two small sections remaining in contact with the female electric plug. The metal headlight rim had been dented and the top of the fender showed three dents later brought out by photographs. In the area of the dents, the right front fender and extending backwards, were blood spots that showed definite movement of the car when blood came in contact with the metal. Very noticeable was the difference between the mud or dirt markings and that caused by the blood. A very definite color of red could be seen.

It was noticed that there were spots of skin and brain tissue on the right front door where large blood markings were also found. These were secured and placed in bottles for further examination. Inside the car were also found additional amounts of this same material together with additional hair. These samples were all secured and were later taken to the Massachusetts State Police Laboratory along with hair which was secured from the subject at the funeral home in Rockland, Maine.

Other important material was also turned over to the Massachusetts Laboratory at this time which included a small piece of glass removed from the clothing of the boy at the funeral home. I understand that the laboratory check made by Dr. Walker identified the type of blood and the hair which was submitted, as having a specific connection with this fatal accident.

Pieces of material from the broken grill, although picked up by persons in the vicinity of the accident, were later secured through hard work and efficient operation on the part of various individuals. The pieces of grill after having been gathered together, made up a complete grill section similar to that secured from the car in question. It was found that after several hours of trying to place broken grill sections in place that the grillwork was identical and had a specific connection with the car in question. Broken glass from the seal beam headlight was also pieced together and fitted in perfectly with other glass fragments found in the headlight of the car.

By piecing together all this information, which included approximately twenty-four exhibits, the driver of the car in question, having been brought to court, finally conceded that he had a definite connection with this death and a plea of guilty was presented to the court.

The Bureau of Criminal Investigation is another important branch of our State Police organization. As set up in our department, it acts as a clearing center under the supervision of a Commissioned Officer

who supervises over the activities of the various Troops in the investigation and prosecution of cases which fall under the criminal laws of our State. This Bureau Officer serves in a supervisory capacity only, as the Maine State Police Department has never established a detective bureau like some other state police departments have established. Our principal reason for such organization is that we have found it more economical and efficient to select officers assigned to major criminal cases in accordance with the troopers' individual personality and ability, which it seems makes them more suited to handle assigned cases. However, using this organization and procedure makes it highly imperative that all our officers receive training in the important field of Criminal Investigation technique and procedure.

This brings us to the type of criminal cases which are usually investigated by the State Police. Although the majority of these cases are investigated in conjunction with other law enforcement agencies in our State, some criminal cases are investigated solely by members of this department. Although most of the cases in this group concern assault and battery, breaking and entering and larceny, a few deal with the more serious sex crimes and murder.

In the latter cases involving murder we usually act as the assisting department. However, the State Police Department has always felt that certain rules and policies should be followed in the investigation of these serious crimes, and in all instances where they are called in to investigate sudden or violent deaths, they have endeavored to work very closely with other enforcement agencies, the County Medical Examiner, the County Attorney and the Attorney General. By so doing, these investigations have been able to rule out cases thought at first to be suicide, and positively identify them as murder or manslaughter cases.

Many of you can probably recall specific cases first thought to be suicide, that later developed to be murder because of scientific investigation and chemical analyses. History reveals again and again that when cases involving murder or suicide make their appearance the general public oftentimes have an inclination to indulge in a form of hysteria, sometimes only reaching a stage of gossip, while other times going so far as to end in tumultuous rioting.

Past experiences, both in the field of medicine and law enforcement have time and again demonstrated that those uninformed in the problems of medicine and law enforcement have a tendency to overlook the established order of proper procedure and the handling of specific cases.

It seems to me that the amateur policeman or the medical person not indoctrinated into the proper investigative techniques in handling these cases, places himself in the absurd position of a man who never played baseball and is ordered to get up to bat and



knock a home run. In most instances he will strike out. But when we, doctors and enforcement officials, are untrained in certain elements of investigative techniques we constitute a hazard in the pathway of justice.

In this day and age I can find no good or logical excuse that can compensate for detailed technical knowledge which is so essential to the protection and safety of the public. Sometimes in the course of investigations that involve sudden deaths it can be noted that someone unfamiliar with proper investigative techniques and as to what relation certain articles have to the successful prosecution of cases, have destroyed fundamental and essential evidence. These errors or omissions can be traced at times to the enforcement official, who for example may pick up the weapon that was used in the suicide or murder and thereby destroy important fingerprints, or it could be a doctor when called to the assistance of a dying man, out of curiosity places his fingers in the hole of the clothing worn by the man and destroys valuable evidence.

Recently while attending a meeting of County solicitors and medical referees at the home of Captain Frances Lee in New Hampshire, who acted as our most gracious hostess, the above mentioned points were emphatically brought out. Another point at this same meeting which was brought out during one of the discussions was the realization that in the majority of sudden death cases the police officer acts in the capacity of a shepherd. He is usually the first at the scene of death, and has an opportunity to get a first class view of the body and surroundings. Mental pictures that he takes and notes he makes at this time aid materially when the medical examiner arrives. After lending assistance and giving facts in the course of the medical examination, the officer then continues

with the body through the pathological examination, then finally through the courts. From the moment the situation is brought to the officer's attention, he then guides the course of the investigation through to its finish.

Today this annual meeting of the Maine Medico-Legal Society is here for one special purpose and that is "to accomplish through the medium of an exchange of ideas with other people, Social Progress." You may all look back for a moment and view the fact that previously a doctor's interest in a patient ended in death. Later postmortem examinations were conducted to learn the type of treatment afforded the patient and the results of it, in order that the cause of death could be determined. Suddenly, it was realized that after conducting such postmortems, deaths that were presumed to have happened through natural causes were actually murders or suicides. But more and equally important was the idea that a very close relationship existed between both the Medical profession and law enforcement officials that effected justice.

At present your State Police are becoming more efficient in their fields of investigation and identification. They have been taking advantage of training offered by Captain Lee and the Harvard University School of Legal Medicine. It is the sincere desire of the State Police to continue this program insofar as possible as I firmly believe that by so doing our State Police will be better able to cope with situations that they may be called upon to investigate and that by so doing they will acquire the knowledge, skill and specialization that will bring about a closer coöperation between themselves and the Medical profession so that justice in all cases may be attained throughout the State of Maine.

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*The Government's Responsibility for the Health of its Citizens—Continued from page 317*

in 1900 the death rate from typhoid fever was 31.3 per 100,000 population; in 1940 it was 1.1. Diphtheria during the same period dropped from 40.3 to 1.1, and tuberculosis deaths from 194.4 to 45.9. There is no need of carrying the comparison any further. You are all as familiar with it as I. The only excuse for considering that an emergency exists is that our voluntary prepayment plans are taking time for their development, but, even at that, they far surpass in growth the history of any other similar

activity. They are rapidly approaching the ideal when their services will be available to every citizen and their coverage will be complete. Free enterprise in the hands of stalwart citizens such as we find in Maine is solving our health problems in the American way. We Americans are proud of our government and realize what a great help it can be but for it to be most effective we must be a part of it and it must originate in the local community rather than at the central seat.

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The great majority of patients with early minimal pulmonary tuberculosis have no symptoms. At present, the only method available for detection of the

truly incipient tuberculous lesion is routine chest X-ray examination at periodic intervals. — David Reisner, *Am. Rev. Tuberc.*, March, 1948.

## PREOPERATIVE PREPARATION AND POSTOPERATIVE CARE OF THE SURGICAL PATIENT\*

D. H. R. LESTER, M. D., Scheuectady, N. Y.

If we, as surgeons and practitioners, are to reduce morbidity and mortality we must adequately prepare each patient individually and continue that care post-operatively until that patient is discharged.

The first step necessary to accomplish this end is a complete history and physical examination, system by system, including digital rectal examination so that the patient as a whole may be evaluated rather than just the area involved in the chief complaint.

To supplement the history and examination a urinalysis, hemoglobin determination and Wasserman should be done routinely.

What is to be done when complicating factors are uncovered? If the surgical diagnosis is a true emergency, every effort must be made to save the life and treat the complications as they arise. If, however, the surgical problem is an elective procedure then time should be taken to reduce the obesity, correct the dehydration, restore the nitrogen balance, transfuse the severely anemic, establish normal clotting and bleeding in the jaundiced, detoxicate the hyperthyroid, establish compensation in the cardiacs, control the diabetics and bring about renal function to its optimum.

It is of material aid in the mechanics of operating and reduces the complications postoperatively if the obese patient is instructed in a low (800-1200) calorie, low carbohydrate diet. This diet is often advantageously supplemented by the use of benzadrine and thyroid in tolerated adequate doses. One caution, observe these patients regularly. I have seen myocardial decompensation result and a latent hyperthyroidism thrown into full toxic activity. The weight need not necessarily be brought to the ideal for the height and age but it is best if it approaches it.

Dehydration carries serious consequences if not corrected. It is especially common among children and here, carries the most serious consequences. These little folks have a markedly limited storage space for fluids and especially glycogen. They slip into acidosis so easily. If vomiting has been persistent and prolonged the loss of the chloride ion may just as easily result in alkalosis.

If fluids are tolerated by mouth, push them. Add glucose, in the form of hard candy, Karo or solution of dextrose. If parental routes must be used, in children it is better to expose a vein, insert a plastic cannula and give 5% glucose in distilled water or saline, slowly. In adults the cannula is usually unnecessary.

Use care in the administration of saline since edema may result from too much. Adults require 15-20 gms. per day. In generalities, for adults, about 3000 c.c. of fluids per day are required to offset the desirable 1500 c.c. of urine output, plus the 1000 c.c. or more lost by way of the lungs and skin, the so called "insensible" loss. Should there be vomiting, drainage from biliary or intestinal sinus or burned area or Wangansteen suction, this increased loss must be balanced by a corresponding increase of parenteral fluid. In children, lesser amounts are required—approximately 100 c.c. per Kilogram of body weight in addition to that lost, are required. However, a good index is a specific gravity of 1.015 of the urine. In those cases complicated by renal impairment one must first determine approximately the extent of the damage. This may be accomplished by determining the N.P.N. which normally is 35 mg. per 100 c.c. or urea which normally is 15 mg. per 100 c.c. It is said that these values are not elevated until renal function is reduced to one-third of normal — hence indicating extensive damage but do not estimate the reserve. A simple means of detecting early impairment of renal reserve is the "concentration-fixation" test. Ability to concentrate urine to a specific gravity of 1.024 indicates good renal function and reserve.

If the hemoglobin determination is below 70% a complete blood count should be done. In the event that no other dyscrasia than anemia alone is found, the normal level should be restored by repeated small (250-300 c.c.) transfusions of whole blood for adults, and about 15 c.c. per Kilogram of body weight in children. This restoration may be supplemented by iron in the form of Blauds Tablets or iron ammonium citrate or iron in combination with Folic Acid. Vitamine B must accompany Folic Acid administration if paralyzes are to be averted. Most marketed compounds containing Folic Acid now also contain the necessary amounts of vitamin B.

Malnutrition usually has associated with it vitamin deficiencies. Also these deficiencies may result from gastro-intestinal disorders, diarrhea, vomiting, inflammation of small bowel or colon, stenosis of upper gastro-intestinal, enterostomy, Wangansteen suction, fever, hyperthyroidism, liver disease and biliary drainage, burns, chronic alcoholism, pregnancy, and prolonged intravenous dextrose feedings.

As a result, the gastro-intestinal tract involvement may be manifested by loss of appetite; lack of the vitamin B complex may produce a profuse flow of

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saliva (sialorrhea); vitamin K deficiencies may cause bleeding gums; diarrhea, a part of sprue and pellegra is due to lack of vitamin C.

The Central Nervous System too is involved. Irritability, nervousness, insomnia may result from vitamin B deficiency as well as numbness, paresthesias and muscular pains; night blindness due to lack of carotene-vitamin A. Even styes and rough, dry, scaly skin may designate a vitamin deficiency.

Vitamin B depletion may cause palpitation and dyspnea and together with hypoproteinemia swelling of the feet in hot weather.

Vitamin K deficiency may lead to massive bruises over pressure areas. These differ from the early scurvy (vitamin C deficiency) signs in that the latter shows petechial hemorrhages and bruises with minute hemorrhages around the hair follicles.

These vitamin deficiencies, if time permits, may be restored to their normal levels by oral feedings. Orange and lemon juices are good sources of vitamin C; Brewers yeast, in 90 mg. doses per day, will supply the B although, crude liver extract in 50-100 c.c. doses per day gives the best source of vitamin B complex; cod liver oil will supply vitamins A and D. Should there be a limited amount of time to prepare the patient there is available for parenteral use vitamins K, C as ascorbic acid, B1 as thiamin and the B complex including thiamine chloride, nicotinic acid, riboflavin, vitamin B6 and pantothenic acid.

The lack of food intake or the excessive loss of proteins will throw the patient into negative nitrogen balance. To compensate for this imbalance the body proteins are called upon to maintain the plasma protein levels. There exists normally a very accurate balance between intravascular and extravascular fluids. The salt concentration in the blood and body tissue fluids is easily and rapidly equalized by diffusion of either the salt or fluid through the capillary wall. Plasma protein exerts a definite osmotic pressure. Because of the size of the protein molecule, it is prevented from diffusing through the capillary wall and so, remains a part of the intravascular fluid. Salt plus the plasma protein exerts an unbalanced osmotic pressure so as to attract fluids from the extravascular space to the circulating blood, thus preventing edema. Since albumin, although a small molecule, exerts 4 times more osmotic pressure than globulin and their normal ratio being 1.7-1 it follows that the greater part of plasma protein osmotic pressure is due to the albumin. As a result if the plasma protein is reduced, especially the albumin, edema follows.

However, a paradoxical situation arises in the presence of dehydration. Here, the plasma protein may be normal in the face of edema. An elevated red blood cell count will demonstrate the hemo-concentration and lead one to suspect the existing hypoproteinemia.

To combat this malnutritious state of hypoprotein-

emia the patient may be given by mouth liver, meats and hydrosolates which are readily converted to plasma proteins. If however, oral feedings are impossible protein hydrolosates may be given intravenously—one or two liters a day. This will supply 60 gms. of protein per liter. It must be given slowly, 20 to 60 drops per minute, to avoid flushing, headache, nausea and vomiting.

Blood plasma, per se, may be used in emergencies. The serum, however, should be treated or obtained from patients who have never had hepatitis to avoid Homologous Serum Reaction. Each liter gives 60-80 gms. of protein. One liter preoperatively suffices but should be continued postoperatively  $\frac{1}{2}$  liter every 24-48 hours.

By classifying patients with heart disease into those under and those over forty years of age, authorities have given us criteria by which cardiac pathology and cardiac reserve may be established.

Those under forty years of age presenting one or more of the following conditions require special investigation and attention. A history of angina or congestive heart failure; definite enlargement of the heart or great vessels; hypertension; diastolic murmur and arrhythmias.

Those over forty years of age with a history of impaired function, such as dyspnea, angina or edema should be studied carefully by electro-cardiography and cardiac tests to evaluate the reserve.

When decompensation has occurred and the surgical procedure is an elective one, operation should be postponed until three weeks or more after compensation has been established.

Treatment of the decompensation, as advised by cardiologists, consists of bed rest, sedation, parenteral injections of the mercurial diuretics to rid the system of edema, judicious restriction of salt and fluid intake and digitalization.

Postoperatively cardiac reserve may be spared and compensation maintained by free use of oxygen, continuation of digitalis and also parenterally given diuretics if edema returns or persists. It is especially important that fluids intravenously at this time, should be given both judiciously and very slowly that acute cardiac dilatation may be avoided. Saline should be restricted lest edema recur or be increased.

The anesthetic of choice is local or low spinal. Of the inhaled anesthetics, ether is probably the least harmful.

In acute emergencies, rapid digitalization, rapid skillful operating doing only that which is necessary to save life and thus diminish both amount and time of anesthesia will do much to decrease the dwindled cardiac reserve.

Nephritis, too, adds much to the risk of operation. Unfortunately, the kidney damage is so often irre-

versible. However, the burden of excretion can somewhat be lightened by decreasing the protein intake to 40-50 grams a day. Fluids should be of such quantity as to produce an output of 1500 c.c. in 24 hours. The damaged kidney is unable to conserve the sodium ion, hence salt should be given, 7 or 8 grams a day.

Postoperatively the urinary output should be maintained at about 1500 c.c. by 5% glucose in distilled water but salt should be held to not over 7-8 grams. Should the CO<sub>2</sub> combining power be lowered to threatening levels sodium bicarbonate may be given by mouth or intravenously.

Diabetics are said to do the best of surgical patients. This no doubt, is because of the careful supervision they receive. Nevertheless, they add, by reason of their diabetes, additional risk to the surgical procedure. It is ideal to have the diabetic patient come to the operating room with an adequate glycogen reserve, urine free from sugar and acetone bodies and a normal blood sugar. This is best accomplished, as in surgical cases complicated by cardiac pathology, by enlisting the aid of the internist. In any event the diabetes must be standardized and any acidosis corrected. Although acidosis is not a contraindication to operation. For by removing the source of infection early, the acidosis will be the more easily corrected. Contrary to former practices acidosis is best measured in terms of the amount of diacetic acid present in the urine. Coma, on the other hand, definitely contraindicates surgery.

To insure an adequate glycogen reserve it is well to give 3 hours before operation 20 grams of carbohydrate (200 c.c. orange juice) with 10 units of crystalline insulin.

Of the anesthetics to be used in diabetics local, spinal or one of the gases is best. Ether tends to depress the liver and thus decrease the glycogen reserve. Th vomiting following it prevents eating, dehydrates and so prevents excretions of ketone bodies.

Postoperatively fluids should be given in amounts to keep the 24-hour urinary output at 1500 c.c. Urine specimens should be collected and checked for sugar and acetone bodies every 3 hours. If necessary an indwelling catheter should be placed to obtain these specimens rather than frequent catheterization which is so prone to lead to a cystitis. Insulin may be given every three hours as indicated by the urine specimen—15 units for an orange-colored reaction, 10 for yellow, and 5 for green. Carbohydrates may, for the first few days, be given in 75-80 gram amounts and covered by adequate doses of insulin. But the regular diet, to which the patient has been standardized, should be returned to as soon as possible. In the event of infections the antibiotics should be used in full doses.

To prepare the patient with biliary tract disease for operation, one literally prepares the liver. It has

many functions. The total number is yet unknown. Among some of the more important ones is the synthesis and storage of carbohydrates, proteins and fats; formation of prothrombin and fibrinogen; furnishes heparin; synthesizes and excretes bile which is essential to the absorption of vitamins A, D and K. Most of its functions will be carried on when only 20-30% of the total remains.

As yet no practicable test or group of tests have been devised to accurately tell the functioning ability of a partially damaged liver. However, we have the serum bilirubin test which measures roughly the accumulation of one of the important constituents of bile. It normally is about 1.2 mg. per 100 c.c. In obstructive jaundice it is increased due to reflux of the bile and injury to the parenchyma thus causing a spillover into the blood stream in greater than normal amounts.

The bromsulphalein test is one not to be used in the presence of jaundice. The dye is excreted by the reticulo-endothelial cells into the bile and thus measures the liver's ability to remove the dye from the blood stream. 5 mgs. per kilo of body weight is given intravenously. Not more than 5-10% should remain circulating in 30 minutes. There is marked liver drainage if 30-50% is retained for more than 2 hours.

The liver detoxifies sodium benzoate by combining it with glycine to make hippuric acid, which is rapidly excreted by the kidneys. The patient is given 6 gm. of sodium benzoate by mouth. All urine passed in the next 4 hours is collected and the hippuric acid content determined. Normally 50% of the amount given is excreted in 4 hours, 1.5 gm. or less indicates severe damage. Gastric retention and renal insufficiency alter the value of the test. It remains, however, one of the best tests in the presence of jaundice or to measure the residual damage after jaundice.

The cephalin-flocculation test measures parenchymal liver damage by demonstrating the abnormal property of blood serum to flocculate a cephalin-cholesterol emulsion. This abnormal property of blood serum is based on the relative proportion of plasma proteins. For even though damaged, the liver can make larger molecules of protein more easily than the smaller. The degree of flocculation is expressed in 1 to 4 plus.

Given a case of acute cholecystitis, one can do a cholecystectomy if it is seen early. Seen late it is best to watch the patient closely. If the infection increases as demonstrated by an increase in temperature, pulse rate, white blood count, sedimentation rate and tender area and muscle spasm it is best to operate, to avoid a possible rupture of the gall bladder. After 3 or 4 days the patient has become very ill and it is better to overcome the dehydration by intravenous fluids, raise the glycogen reserve by using 5% dextrose solutions and restore the chlorides with



saline and combat any hemorrhagic tendencies. Heat may be applied to the upper abdomen, duodenal tube and suction will relieve the vomiting and sedatives, the pain.

In cases of chronic cholecystitis and lithiasis it is well to check the serum bilirubin or icterus index to detect the presence of a latent jaundice due to a silent common duct stone. The usual attention should be given to combating dehydration, supplying adequate carbohydrate and providing ample vitamins for liver function improvement.

In common duct obstructions, the conditions of the liver is of prime importance. The degree of jaundice and its fluctuation should be measured by the icterus index or serum bilirubin. The liver function may be estimated by the hippuric acid test, if jaundice is present or the bromsulfalein test if absent. Since the liver is intimately associated with metabolism and protein synthesis and storage, the total blood proteins should be determined. Normally they are 6-8 mg. per 100 c.c. If low they should be restored by whole blood, plasma or hydrolysates. If vomiting has been persistent, check the  $\text{CO}_2$  combining power (N500-750 volume %) if low treat the acidosis; also the chlorides (N 350-550 mg. per 100 c.c.) for hypochloremia. The prothrombin time or clotting and bleeding time should be done to warn of hemorrhagic states. The blood of the patient should be typed and cross matched with a compatible donor.

The dehydration should be overcome by the use of 5% dextrose in distilled water unless there is a hypochloremia, in which case saline is the better medium for the dextrose. The diet should be high in carbohydrates and proteins but low in fats. For a fatty liver is more susceptible to volital anesthetics. It will require from 7-10 days usually, to recondition the liver.

The three great postoperative hazards are liver failure, renal failure and bleeding.

Liver failure accounting for the postoperative death in 24-48 hours, is probably due to a severely damaged liver that just gets by in normal life but has no reserve to withstand surgery or trauma. It occurs too early to be due to infection and too late to be caused by shock. It is first indicated by an unusually prolonged delay in recovery from anesthesia, semi-comatose condition, delirium, restlessness, muscular twitchings, hyperpyrexia, coma and death.

Delayed liver failure occurs 6 to 8 days after operation and has no high fever. There is a thinning of the bile drainage with marked increase in its volume for a short time, then the patient becomes weaker, develops regurgitant vomiting and slides into coma.

To combat this failure a low fat, high carbohydrate, high protein diet or intake is suggested; fluid balance maintained; adequate supply of vitamins; and transfusions to supply proteins and combat shock.

Renal failure is believed to result from a damaged kidney further insulted by bilirubin which injures the kidney tubules and the toxic substances that the liver fails to detoxify further injuring the convoluted tubules so as to produce albumin and casts, elevate the blood urea and N.P.N. and decrease the P.S.P. excretion.

The clinical picture is that of liver failure plus decreased bile drainage, a deepening of the jaundice, lengthening of the prothrombin time, decrease of urinary output, and an increase of blood urea and N.P.N., coma and death.

The time to operate upon these cases of biliary tract disease is after sufficient time has been taken to condition the liver with high carbohydrate, high protein, low fat diet; overcome dehydration; restore renal function to a urinary output of 1500 c.c. urine in 24 hours; bring the renal and liver functions to their near normals; when the serum bilirubin or icterus index values have become stationary; and there is a good response to vitamin K.

The anesthetic of choice is spinal or block supplemented by cyclopropane or nitrosus oxide and oxygen.

Postoperatively the patient should receive 3000 c.c. of fluids or more depending on bile drainage, "insensible" fluid loss, perspiration, etc. There should be 1500 c.c. of urine at a specific gravity of 1.015. Early feeding of the high carbohydrate, high protein and low fat diet. Since bile drainage depletes calcium salt and bile salts, intravenous restoration of the minerals and sodium chloride should be undertaken. The lack of bile salts may cause asthenia. These must be replaced via the gastro-intestinal tract. This may be accomplished by returning 150-300 c.c. of drained bile via duodenal tube. On the 5th or 6th postoperative day the common duct tube may be clamped to induce the bile to flow through into the duodenum. If colicky pain results, or peritubal bile drainage occurs or there is a persistent lack of bile in the stools duodenal tube feedings of bile must be resumed or bile salts in tablet form given orally. Normally, the T tube may be removed in about 12 days but if trial clamping results in failure to divert the bile from the T tube to the normal channels a cholangiogram may be of assistance in determining when prolonged drainage is necessary. This may be extended as long as 6 months. In the event of the necessity for prolonged drainage the tube should be clamped during the daytime and permitted to drain during the night. One must not overlook the possibility of a remnant stone in these cases.

Blood clots, authorities now agree, as postulated a long time ago. Prothrombin plus thromboplastin plus calcium produces thrombin. Thrombin plus fibrinogen forms fibrin or clot. Jaundice reduces prothrombin concentration by preventing bile salts from reaching the intestinal tract. Vitamin K corrects

hypoprothrombinemia. It is fat soluble and therefore requires bile salts for its absorption. Hence vitamin K is an important factor in preventing postoperative bleeding in obstructive jaundice cases. As a matter of fact it is used as a test for obstructive jaundice, for in a case with intense jaundice and acholic stools a rapid return of a low prothrombin concentration to normal by administering vitamin K strongly suggests that the jaundice is due to obstruction.

To determine the percentage of prothrombin in plasma, Quick devised a method which measures the time required for citrated plasma to coagulate, in the presence of calcium chloride and excessive tissue thromboplastin as compared to the time required for normal citrated plasma to coagulate in the presence of calcium chloride and tissue thromboplastin. These times are compared with a standard reference curve and the percentage of prothrombin read off directly. Above 35% prothrombin in plasma is required to prevent hemorrhage.

Vitamin K with bile salts may be given orally. Usually three days' preoperative treatment suffices. The dose is 3 mg. of vitamin K with 1 to 2 mg. desiccated bile salts per day.

In the event of vomiting, 1 c.c. of water soluble vitamin K may be given intramuscularly 48 and 24 hours before operation. In dire emergencies 2 c.c. of the vitamin may be given intravenously and supplemented by fresh whole blood transfusion.

The prothrombin time should be checked for the vitamin K may fail. When the liver involvement is so extensive as to be totally unable to manufacture prothrombin or to manufacture too little, whole blood or fresh plasma will furnish the prothrombin. It is to be remembered that prothrombin diminishes in long standing plasma. Acute infections involving the liver may also give temporary failure to respond to vitamin K.

Postoperatively in extensively draining biliary cases vitamin K should be continued in the above mentioned doses and means until the stools are well colored.

A very controversial subject is that of handling the problem of venous thrombosis and complications. The phenomenon of embolism is a source of constant fear to physicians for venous thrombosis occurs not exclusively postoperatively, but in the postpartum period or after a prolonged medical illness as well.

The terms used to describe the process involved in venous thrombosis have been somewhat confusing. I believe the terminology is now fairly well established. By Phlebitis is meant inflammation of the vein. In Thrombophlebitis there is inflammation of the vein plus thrombus formation but no infection. Phlebothrombosis is used to describe a thrombus in the vein without inflammation.

Thrombophlebitis most frequently occludes the common femoral, Iliac and later the tributaries of the

femoral and profundus femoris. This occludes both the deep and collateral veins, accounting for the cyanosis, great swelling and tenderness of the leg involved.

Phlebothrombosis usually takes its origin from the deep veins of the calf and extends into the popliteal and femorals. The thrombus only partially fills the lumen permitting circulation but since it is not adherent to the vein wall can give rise to dangerous emboli if fragmented or dislodged.

It should be a part of the daily visit to the patient to look for swelling and tenderness of the legs, especially of the calf muscles; check with the Homan's sign (dorsi flexion of the foot gives discomfort in the calf and popliteal regions). A rise of temperature, pulse and respiration should suggest the possibility of early clot formations. If necessary measure the legs daily or even several times a day to determine whether swelling is present and progressive or not.

If pulmonary embolism does occur and is of sufficient size so as to occlude the pulmonary artery death occurs promptly. Smaller ones pass on toward the periphery. If they produce infarction there is cough, hemoptosis and pain, usually substernal and increased by deep breathing. X-rays show the characteristic wedge-shaped shadow pointing centrally.

Prevention of thrombus formation may be aided by frequent turning of the patient; deep breathing exercises; active motion of extremities, early ambulation; adequate hydration to prevent hemo-concentration; prevent or correct abdominal distention. Heparin and dicumarol may be used provided adequate facilities are at hand to determine clotting and bleeding times and prothrombin times.

Once thrombus has formed and a non-fatal embolus occurred you must decide whether to give the anticoagulants, use repeated paravertebral blocks, ligate or to treat the condition most conservatively with rest, heat and elevation.

Considerable accurate and reliable information must be available to use the anticoagulants.

If ligation is decided upon what level should be selected? The vena cava, just above its bifurcation, will be above the thrombus in the greatest number of cases. Femoral ligation and division is commonly done bilaterally. The ligation is proximal to the profundus femoris if thrombus is found and distal to the profundus if no clot is present and the deep circulation is functioning.

The infarction or embolism should be treated by relief of pain with adequate doses of morphine and chest binder and administration of full doses of the antibiotics to prevent abscess formation and sepsis.

Hyperthyroidism is so far reaching in its effects upon other systems of the body that more than usual care and attention must be used to carry the patients to a successful conclusion.



It is most important to know whether iodine has been used previously, for if it has, it will mask the severity of the toxicity. Further the first response to iodine is the best and can never be duplicated.

Duration of the disease, history of crises, amount of loss of weight and age of the patient will help to estimate the severity of the hyperthyroidism.

Among the necessary tests to aid in estimating the surgical risk are blood pressure, pulse pressure, pulse rate, basal metabolic rate, urinalysis, complete blood count, fasting blood sugar, N.P.N., Wassermann, serum protein determination, liver function test (such as Hippuric acid test), and lateral X-ray of the chest for tracheal compression.

Cardiac complications are not uncommon for the increased rate together with the increased cardiac output as shown by the increased pulse pressure increases the cardiac work. This eventually will cause hypertrophy, fatigue and dilatation. The irregularities so often found are corrected by the same principles used to correct congestive heart failure. Quinidine, however, is recommended for the irregularities persisting postoperatively only.

Thyroid toxin impairs the liver's ability to store glycogen. Further, the liver may be subjected to fatty infiltration, atrophy and cirrhosis and thus produce jaundice, during prolonged hyperthyroidism.

Diabetes, a frequent complication or associate of hyperthyroidism is controlled as is diabetes alone. Removal of the gland will hasten the improvement of the diabetes.

Rest, one of the most important steps in preparing the patient for operation, should include adequate doses of sedatives to produce sleep and alleviate nervousness. A 4000-5000 calory diet, high in carbohydrates, proteins and vitamins, especially B1 and B complex should be given. Stimulants, such as tea, coffee, and tobacco should be withheld.

Fluids in 3000 to 5000 c.c. amounts per day will rehydrate.

Decholin 3¾ grs. three times a day has been suggested, even though jaundice is absent.

Iodine (as Lugol's solution) 10-15 minims three times a day will decrease the nervousness, restlessness, sweating, tremor pulse rate, basal metabolic rate and increase the appetite and weight.

More recently propylthiouracil has been used. In the severe cases 50 mgs. every 8 hours and in the less severe cases 50 mgs. every 12 hours is the recommended dose. This produces an increase in the vascularity of the gland so that iodine should be given in conjunction with it or alone for 10-14 days before operation.

Because of the voluminous rate of oxygen consumption by the toxic patient cyclopropane is a very advantageous anesthetic.

Postoperatively anoxemia generally and with specific respect to the liver may be prevented by placing the patient in an oxygen tent. A transfusion will supply more oxygen carrying red blood cells. Intravenous glucose solutions will combat dehydration and furnish nourishment, until the high caloric oral feedings can be resumed. Rest and quiet are essential and may be the more easily had with full doses of morphine. Iodine (10 drops by mouth or 20 drops by rectum) should be continued. The drains, if any, should be removed 24 hours after operation. Early ambulation is most desirable.

One of the most feared postoperative complications is hemorrhage. For the bleeding occurs in a closed space and its pressure is exerted upon the trachea to cause compression. Unless promptly released by opening the incision widely it may produce suffocation.

Similarly tracheal edema should be relieved by tracheotomy without hesitation.

The thyroid crisis is no less of a serious complication. It may be touched off by the operation, a mental shock or trivial infection pre or postoperatively. Its symptoms are vomiting, diarrhea, elevation of temperature, pulse and respirations, restlessness, delirium, coma and death.

A vicious cycle is set up—fever increases metabolism, increased metabolism increases heat production and temperature in turn is increased. It's imperative, then, to reduce the excess temperature. This may be accomplished by the use of the oxygen tent which also helps to control restlessness. Ice bags too, may be placed about the trunk and extremities if necessary. 5 or 10% glucose in distilled water given intravenously in 3000 to 5000 c.c. amounts each 24 hours are required to prevent dehydration. Sedation is essential. Morphine will act promptly. Sodium amytal 6 gms. or nembutal 3 grs. orally or rectally will usually relieve the restlessness. But if necessary pentothal sodium may be given intravenously with the glucose. Iodine — as Lugol's sol — should be given in 20-30 minim doses by mouth or 50-100 by rectum or 50 minim in 1000 c.c. of intravenous fluid.

Tetany results when parathyroid function is lost from completely removing the small glands or interfering with their blood supply.

Tetany may be demonstrated to exist by Trousseau's sign. A blood pressure cuff is applied to the arm and pumped up to 200 m.m. This produces the accoucheur's hand. Another test is Chvostek's sign. By percussing the facial nerve in front of the ear there results a spasm of the muscles supplied by the nerve.

Chronic tetany may give rise to epileptiform attacks, muscular cramps, tingling of hands, nausea, vomiting, headache, trophic disturbances of the nails, hair and teeth. Cataracts may develop.

Treatment should provide the calcium ion. This may be had from calcium lactate 3 drams 4 times a day; cod liver oil 2 or 3 drams twice a day or viosterol. The pH of the blood may be shifted to the acid side to promote calcium ion production by giving ammonium chloride or hydrochloric acid. A transitory source of calcium is to be had from 5 c.c. of a 10% solution of calcium chloride. This is best diluted to 100 c.c. in saline and given intravenously.

Parathyroid extract 10-50 units per day intramuscularly produces its effect in a few hours, reaches its maximum in 3 to 8 hours and disappears in 24-48 hours. The blood calcium levels determine the frequency and dose.

Dihydrotachysterol known as A. T. 10 will give a rise in blood calcium levels in 48 hours. It is usually given orally daily in 3 c.c. (15 mg.) doses until calcium appears in the urine then decreased to about 1 c.c. (5 mg.) 3 to 5 times a week. Overdosage can cause deposition of calcium in the soft parts and decalcification of the bones.

Hypercalcemia produces anorexia, nausea and vomiting, headache, stupor, ataxia, thirst, albuminuria and skin rashes. These symptoms and signs are corrected by omitting the medication, rest, cathartics and forcing fluids.

It has been demonstrated that above 11.5 mg. large amounts of calcium are secreted in the urine. This may produce kidney stones or a generalized deposit of calcium in the kidney (nephrocalcinosis).

By adding Sulkowitch's reagent to urine in equal parts calcium, if present, is precipitated as a fine white flocculant of calcium oxalate. If no precipitate there is no calcium and the blood level is probably somewhere between 5 and 7 mg. per 100 c.c.

The preparation of the patient with gastric, small bowel or large bowel lesions follows in general the principles as already outlined. It is important to restore fluid and electrolyte balance, create a positive nitrogen balance, provide adequate caloric and vitamin intake, correct existing anemia and bring the CO<sub>2</sub> combining power to normal.

Distention can be reduced by the use of the Kantor tube and Wangenstein suction.

Partial sterilization of the bowel lumen may be accomplished with adequate doses of sulfamerazine or sulfasuxidine given 5 to 7 days preoperatively and continued postoperatively.

Postoperatively it is essential to continue the tube drainage to prevent distention and remove accumulated fluids. If fluids and proteins are not given in adequate amounts the resulting edema may occlude the stoma of gastroenterostomy or enteroenterostomy. Liquids should be started early — 48 hours after operation and increased as rapidly as tolerated to soft diet. The tube should not be removed however, until the stoma is demonstrated to be functioning.

Infections, postoperatively, are less common now that there are so many safe chemotherapeutic agents to select from. Given prophylactically, they have decreased the morbidity, even mortality as well as prevented serious complications.

The triple sulfonamides remain the choice for general use against gram positive coccal infections. They do not require alkalization of the urine and are well tolerated.

Penicillin, the most widely used parenteral bacterial suppressor, acts best against the gram positive organisms.

Aureomycin is recommended for those organisms that have become resistant to sulfonamides as well as the Rickettsial infections and virus pneumonia.

Streptomycin is said to be the best combatant against the tubercle bacillus. It will often control urinary infections when sulfadiazine has failed.

Chloromycetin is finding its place in surgery by demonstrating its effectiveness against the enteric infections as well as the bacillary urinary and viral infections.

This presentation, though taking much of your time, has at best been only a summary. I sincerely hope that it has served to impress the importance of the necessity for thorough patient study and treatment so that they may have the better chance to survive to enjoy the purpose of all surgery, namely freedom from pain and better health.

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City-wide X-ray surveys can be conducted with relative economy of means and money. Previous experience in cities already surveyed and preliminary studies of other communities indicate that if present facilities are fully utilized and if newly discovered cases are given realistic disposition, the increased case load of tuberculosis will not present a grave problem to the community. — Francis J. Weber, M. D., *Ohio Pub. Health*, Feb., 1948.

The incipient lesion of pulmonary tuberculosis of limited extent is practically always of unstable character and that in a large proportion of the cases it progresses to advanced and destructive disease. There is reason to believe that the majority of cases of manifest clinical tuberculosis have their origin in these seemingly inconspicuous small lesions.—David Reisner, M. D., *Am. Rev. Tuberc.*, March, 1948.



## RETRODISPLACED UTERUS

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Dr. Howard Kelly (I) speaking in 1915 said that the treatment of the retroverted uterus could be divided into three eras. (1) Era of Ignorance (antiquity to 1810), (2) Era of the Pessary (1810-1885), (3) Era of Operative Intervention (1885-1915). In the same speech he listed over fifty operations that had been devised to cure this condition. The fact that fifty operations had been suggested for the cure was prima-facie evidence that something besides a suspension was necessary if these cases were to be cured.

Dr. Baldy, (II) the co-inventor of the so-called Baldy-Webster operation, speaking from the same platform with Dr. Kelly, Dr. Gilliam, Dr. Webster, Dr. Cragin and other doctors of unquestionable ability and integrity, made the blunt assertion that in his opinion "Nine-tenths of the operations performed on women for retro-displacements are uncalled for" and further stated that "The symptoms for which the operations were done came from the complications and not from the displacements." Dr. Baldy, on that day, ushered in the fourth era, i.e., the Era of Indecision which has lasted thirty years and more.

This indecision is shared by most medical men and many general surgeons. The medical men have been led to believe that the retrodisplaced uterus is in a normal position; and many general surgeons, believing the same, do not bother to suspend the uterus when they find it retrodisplaced during their operations for appendicitis and pelvic lesions. These doctors lift their eyebrows when the gynecologists continue to operate on these cases of retrodisplaced uteri. During these thirty years few articles have been written on this taboo subject. The occasional review by gynecologists such as that written by Dr. Ralph Hurd (III) shows that 90% of their patients are completely cured by operation and treatment.

What is the discrepancy between these two radical beliefs—that of Baldy who believed that nine-tenths of the suspension operations are uncalled for and that of Hurd and other gynecologists who find that 90% or more of these patients are relieved of their symptoms by operation and treatment? It seems to me that the discrepancy is that Baldy was talking about one group of cases and the gynecologists were operating upon and reporting on another group.

Dr. Baldy and most medical men undoubtedly reached their opinions because they had seen cases of retrodisplaced uteri that gave few or no local symptoms. They also had seen cases that had complained of sacral backache, indefinite pelvic pains, frequency and incontinence of urine, dysmenorrhea, irregular

menses, etc., that had undergone suspension operations for the correction of the displacements and after supposedly successful operations a majority of these patients still complained of the same symptoms that they had prior to the operations. They also had seen many retrodisplaced uteri that had come up into the normal anterior position after office treatment and still the same symptoms had persisted. They never had seen surgeons supplement their round ligament suspensions by treatments aimed at curing the ever present complications. It isn't surprising that Dr. Baldy and doctors in general should jump to the conclusion that the majority of the suspension operations were not necessary and were not curative.

The group of cases that gynecologists operate upon are cases that persist in having symptoms and signs after adequate office treatment and appropriate exercises have been tried and after the uterus stays wedged in the cul-de-sac. Furthermore gynecologists do not always perform just a simple suspension operation for this condition. Many of these cases of retrodisplacement have developed so much pathology in the genital and pelvic organs and the adnexa that more radical surgery has to be performed to obtain a cure. And lastly the gynecologists not only direct their efforts toward replacing the uterus into the normal anterior position and establishing unimpeded uterine drainage but they also direct their efforts toward curing the complications. It is these latter efforts that make the difference between a successful and an unsuccessful operation because, as Baldy says, the symptoms are due to the complications and not to the displacements.

**NORMAL UTERINE PHYSIOLOGY:** — The normal position for the uterus is in the true pelvis with the fundus of the uterus easily palpable behind the pubic bone. The uterine canal and cervical canal make a smooth bow from the fundus downward, backward, and forward into the vagina. There is no obstruction to the flow of secretion downward from the fimbriated ends of the tubes through the uterine cavity and into the vagina. The fundus is not tender to palpation. Most of the lymphatic and venous drainage from the normally placed uterus returns through the broad ligaments and proceeds, either along the ovarian veins and accompanying lymphatics or along the uterine veins and lymphatics. But there is a lesser amount of drainage from the uterus and cervix that drains downward between the anterior vaginal wall, bladder, and urethra to the perineum and also some downward behind the posterior vaginal wall, around the rectum to the anus, and this returns either along

the middle and inferior hemorrhoidal veins and lymphatics or anteriorly to the groin along the femoral and iliac vessels.

**CAUSES OF RETRODISPLACEMENT:** — The causes of the retrodisplaced uterus are numerous:

1. It may be due to congenital weakness of the round ligaments and broad ligaments and pelvic floor.
2. It may be due to abnormal strains on normal ligaments such as is encountered in lifting heavy objects or to the trauma experienced in childbirth.
3. It may be caused by heavy uteri which result from:
  - A. Subinvolution following pregnancy.
  - B. Chronic or acute metritis which has been caused by vaginitis, endocervicitis or salpingo oophoritis or by a combination of the same or from infected Nabothian cysts and erosions of the cervix.
  - C. Fibroids and other uterine tumors.
4. It may be due to pelvic adhesions which have followed a pelvic peritonitis due to appendicitis or acute salpingo oophoritis or from the trauma of poor surgery.

**COMPLICATIONS AND PATHOLOGICAL SEQUELLAE:** — The complications are due to pathological conditions that are microscopic or are hidden unless a distinct effort is made to look for them.

1. *Chronic and acute metritis:* When the uterus becomes retrodisplaced it assumes either the retroverted or the retroflexed position. Theoretically these two conditions are quite distinct from one another but both cause the same symptoms and both should be treated the same. The moderately retrodisplaced uterus offers little or no interference to the flow of secretions from the uterine cavity downwards through the cervical canal into the vagina. But when the displacement is complete then the fundus of the uterus is lower than the cervical exit and the secretions from the fundus uteri have to flow up hill and when the uterus is retroflexed then the uterine and cervical canal no longer make a smooth bow — the curve is broken by an acute angulation at the juncture of the cervix and uterus and this kinks off the flow of secretions from uterus to the vagina. A retention of some of the uterine secretions occurs in the uterine cavity and this makes an excellent media for the growth of bacteria. A chronic or acute metritis sooner or later is bound to occur and this infection spreads to the tubes and ovaries and to the cervix and other pelvic organs.

2. *Varicosities and sclerosis of arteries in the pelvis:* As the uterus falls backward the pelvo-ovarian ligaments become twisted and cause torsion of the ovarian veins. This torsion causes large varicosities in the broad ligaments and also venous congestion in

the tubes and ovaries, uterus and cervix. The venous congestion increases the resistance to the flow of the blood through the arteries and arterioles and these vessels react to this increased resistance by a compensatory thickening of their walls. The thicker the arterial walls the smaller the lumens and the smaller the lumens the more resistance there is to the flow of blood through these vessels. Nature tries to make up for this decrease in blood supply by forming more arterioles but if the pelvic congestion continues then the new vessels will also become thickened.

3. *Cervical Stenosis:* If an endocervicitis is not the original cause of the retrodisplaced uterus then an endocervicitis will ultimately follow the metritis. The cervix reacts to infection by becoming swollen and later a fibrous thickening occurs causing a narrowing of the cervical canal and ultimately the ducts of the Nabothian glands become blocked and infected Nabothian cysts result. These pathological processes in the cervix all add their bit towards narrowing the cervical canal and making poor drainage from the uterus to the vagina.

4. *Ovarian Pathology:* As the uterus falls backward the tubes and ovaries fall backward and downward and the broad ligaments lie on top of them and press upon them. This constant pressure in time causes definite pathological changes in the ovaries. Some shrink and become sclerotic with corrugated thick tunica which resist ovulation. While others become large and filled with follicular cysts and some become large and heavy due to fibroids in the stroma.

5. *The Fallopian tubal Pathology:* When the tubes prolapse downward they become congested and are likely to develop acute or chronic infection which in turn may cause pelvic peritonitis and adhesions form between them and the intestines, greater omentum, ovaries and uterus.

6. *Non-suppurative Urethritis:* Due to the torsion of the pelvo-ovarian ligaments and the falling backwards of the broad ligaments there is definite interference with the drainage of venous blood and lymph from the uterus and tubes and ovaries through the normal channels and a large proportion of this drainage is now shunted downward between the bladder and urethra and the anterior vaginal wall. These collateral circulations become engorged with infected blood and lymph from the uterus and cervix and gradually a peri-urethritis occurs. This results in a narrowing of the whole urethra and in a fibrosis of the internal and external urethral sphincters. Viewed through a Kelly endoscope the urethral mucosa looks red, swollen and injected.

7. *Proctatinitis:* For the same reasons as mentioned above some of the uterine drainage is shunted downward between the rectum and the posterior vaginal wall and a peri-proctatinitis occurs which is followed by a fibrosis of the anal sphincter.



**SYMPTOMS OF RETRODISPLACEMENT:**—The symptoms of retrodisplacement vary with the severity and the number of complications or pathological processes that are present.

1. Chronic or acute metritis always coexists with salpingo-oophoritis and cervicitis—so it is impossible to separate the symptoms and attribute them to any one of these lesions. Like all infections these conditions cause general symptoms of malaise, asthenia, headaches, nervousness and irritability as well as local symptoms of various types and degrees of pain in the lower abdomen which are aggravated by work and by menstruation. They may cause sacral backache and irregular menses—too much or too little or too often or too late.

2. The varicosities and sclerosed vessels of the broad ligaments and pelvis will cause thumping pains in the lower lateral quadrants of the abdomen according to their severity. The kinked off cervical canal or the stenosed cervical canal will offer resistance to the flow of secretions from the uterus into the vagina and thereby will cause various degrees of dysmenorrhea. If the resistance to the flow outward is greater than that offered by the Fallopian tubes, some of the flow will be emptied into the abdominal cavity and the backward flux of endometrium can easily graft itself onto tubes and ovaries and peritoneum causing endometriosis which in turn will add its symptoms.

3. Sterility can be caused by the inability of the sperm to work its way through the narrowed cervical canal or it may be due to the inability of the egg to progress through the congested, twisted, infected tube. But sometimes the smaller and more agile sperm can work its way up into the tube and fertilize the isolated ova in the tube or pelvis and thus cause ectopic pregnancy.

4. Non-suppurative urethritis causes a definite symptom complex. The patients complain of frequency or urgency of urination especially during the morning and less during the afternoon and none at night although occasionally the sequence is reversed, nocturia being the chief complaint. These patients also complain of aching pains in the lower lateral abdominal quadrants. These pains are worse in the morning and at menses. In fact these pains are often mislabelled dysmenorrhoea. The pains are often referred down into the groins and sacral backache and pain in the coccyx region are sometimes present. Quite often these patients complain of stress incontinence, i.e., they dribble urine when they cough or laugh or strain. They attribute their frequency of urination to their nervousness but the truth is the nervousness is caused by the non-suppurative urethritis. These patients will seldom voluntarily complain of frequency of urination because the symptoms are so common amongst women that they think that it is just another burden that women kind must suffer in silence. The urine of these patients contains no albu-

men, no sugar and no pus cells and because of this lack of laboratory evidence doctors sometimes label them as hypochondriacs or neurotics.

5. Fibrosis of the anal sphincter varies in amount and the calibre of the anal canal varies with the fibrosis. This interferes with the normal muscular action of dilatation and contraction. A tight anal sphincter causes anal discomfort. It interferes with the normal emptying of the rectum and causes recurrent attacks of hemorrhoids.

**OMENTAL AND INTESTINAL ADHESIONS IN THE PELVIS:**—Normal peristaltic movements of the intestines are necessary for the proper digestion of food and the elimination of waste products. When the omentum becomes firmly attached to the uterus and adnexa and to loops of intestines then definite interference with intestinal peristalsis occurs. The uterus is fixed in the pelvis and when the lower border of the omentum attaches itself to the uterus then the omentum can no longer move freely around the abdominal cavity. The undulating squirming loops of small intestines beneath the omentum are compressed by it. Wherever there are small intestinal adhesions there is an interference with peristalsis and the more fixed the adhesions the more interference with intestinal movements. The omentum that is fixed in the pelvis asserts a continuous pull on the transverse colon to which the upper border of the omentum is attached and the transverse colon is pulled downward from its normal position in the upper abdomen towards or into the pelvis. This pull is also transmitted to the stomach and to the liver. The transverse colon is attached to the greater curvature of the stomach by the gastrocolic omentum and the upper border of the stomach is in turn attached to the liver by the gastrohepatic ligament. So it isn't surprising that these patients complain of general abdominal pains and discomfort and gaseous eructations, heartburn, bloating and constipation.

**TREATMENT OF RETRODISPLACEMENT OF THE UTERUS AND ITS COMPLICATIONS:** The basic principle in the treatment of this condition is the re-establishment of good drainage. In most cases this can be accomplished by office treatments and by proper exercises. In cases where the retrodisplacement has been caused by weak pelvic ligaments or by overstraining the condition can usually be corrected by grasping the cervix with a tenaculum and pulling it downwards and suddenly backwards and at the same time pressing with the other hand above the pubis and passing the fingers behind the fundus and replacing it into the anterior position behind the pubis. A properly fitting hard rubber pessary of the Hodge type may be of assistance. These patients are instructed to place six-inch blocks under the foot of their beds and sleep on their stomachs. Some of them are helped by assuming the knee chest position a few times a day.

The cases of retrodisplacement that are due to the weight of the uterus especially those that are due to chronic or acute metritis and secondary to endocervicitis can usually be cured by cauterizing any cervical erosions that may be present or puncturing and cauterizing all Nabothian cysts. A dilatation of the cervical canal may be necessary but this can be performed in the office with but little pain by using graduated sizes of the Hegar dilator. It takes about six weeks for these cauterized cervixes to heal and for the chronic metritis to subside. Then it is usually possible to replace these uteri by hand and the same treatment as described above is instituted.

If non-suppurative urethritis is present this can be cured in the office by placing a pipette full of 2% Butyn in the urethra and waiting a few minutes. Then the narrowed constricted external urethral sphincter is gently dilated to 10 mm. with the Kelly urethral dilator. The dilatation of the sphincter muscles breaks the fibrous bands allowing the muscles to dilate and contract normally and this stops the frequency of urination and the incontinence. After this a No. 10 Kelly endoscope is passed through the urethra into the bladder and the bladder is emptied. Then under direct vision, using a head mirror for indirect lighting, the swollen reddened urethral mucosa from the closed internal sphincter outward to the external sphincter is painted with 10% silver nitrate making sure none of the solution gets into the trigone of the bladder. One, two, or three of these treatments, a week apart, usually will cure this condition completely especially when supplemented by the elimination of acid foods and spices from the patient's diet.

The fibrosis of the anal sphincter can be treated successfully in the office by injecting the sphincter with Bucaine solution and then forcibly dilating the sphincter by fingers. As soon as the fibrous bands are broken the sphincter muscles again function normally.

When the retrodisplaced uterus persists in staying wedged in the cul-de-sac in spite of treatment and when symptoms persist and the fundus of the uterus is tender to the touch of the palpating finger then operative interference is indicated and this is performed in a routine manner as follows:—

1. The urethra is dilated to 10 mm. with the Kelly dilator and then the No. 10 Kelly endoscope is passed through the urethra and the bladder is emptied. These two procedures will cure most cases of non-suppurative urethritis but if the symptoms do not disappear then the office treatment as described above must be instituted at a later date.

2. A careful bimanual examination of the cervix and uterus and adnexa is made. This final recheck under anesthesia often will change one's diagnosis and save unnecessary surgery or command a different surgical approach.

3. A dilatation and curettage is performed to insure unimpeded cervical drainage of secretion from the uterus. The external cervical os may be visibly stenosed but usually it is the upper cervical canal and the internal cervical sphincter that cause the obstructions.

4. Erosions of the cervix and infected Nabothian glands usually are taken care of in the office but if not they should be cauterized in the operating room. Care must be taken not to cauterize the cervical canal for fear that a stenosis of the canal will occur at a later date. Often Nabothian cysts can be felt by the examining fingers when they are not visible to the eye and these should be punctured by cautery and their sacs destroyed. The cervix is the greatest foci for systemic infection in women. Even after the most thorough cauterization some infected Nabothian cysts may remain. This was *repeatedly demonstrated* in the days when supracervical hysterectomies rather than pan hysterectomies were performed. The upper cut end of the cervix would be found filled with infected mucous craters after the Nabothian glands had been thoroughly cauterized from below.

5. If a rectocele or cystocele or both are present they should be repaired.

6. After all the vaginal work has been taken care of then a manual dilatation of the anal sphincter is routinely performed. It is surprising how often some degree of fibrosis of the anal sphincter is found and how much rectal discomfort is relieved.

7. A Pfannenstiel incision is the least disfiguring of any abdominal incision. It affords good visualization of the pelvis and adequate room to work and post-operative hernias cannot occur. After opening the abdomen it is well to place the patient in the Trendelenburg position, then pack off the small intestines from the pelvis and look at the uterus and adnexa before any attempt is made to dislodge the uterus from the retrodisplaced position. Then the uterus is seen to be congested, mottled, grayish red in color and the varicosities in the broad ligaments can be seen. The minute the uterus is brought up into the anterior position then the mottling and congestion starts to disappear and in a few minutes it will disappear completely. The varicosities also are not discernible as a rule after the uterus is brought forward and the torsion of the pelvo-ovarian ligaments has been corrected.

8. A Cragin modification of the Gilliam round ligament suspension operation has been quite satisfactory. Care must be taken to grasp the round ligaments within one-half inch distance of their attachment to the uterus and then bring the loops through the peritoneum and the recti muscles in the vicinity of the external inguinal rings and fasten them securely to the shelving edges of Poupart's ligaments.

*Continued on page 335*



## OBSTETRICAL PROBLEMS

### Carcinoma of Cervix Complicating Labor at Term

E. D. HUMPHREYS, M. D., Pittsfield; M. A. WEBBER, M. D., Pittsfield; and  
PAUL R. BRIGGS, M. D., Hartland\*

Report of two cases with discussion:

Mrs. A. K., age 37, a multipara VI, was admitted to the Scott-Webb Memorial Hospital, May 31, 1948, in apparently active labor. The physician who referred her was an M. D. called to attend her after 2 days unsuccessful delivery under the direction of a non-M. D.

On admission, the patient presented a well developed and nourished appearance but was in marked distress. History obtained from family stated she had been well throughout pregnancy but complained of spotting at intervals with no frank hemorrhage. Her appetite had been good and weight gain normal. Physical examination revealed no abnormal chest signs—abdomen enlarged in respect to normal nine months pregnancy—fetal heart of 120 heard in left lower quadrant anteriorly—head actively engaged—B. P. 116/70, pulse 80—respiration 22—urine negative for albumen and sugar—Hinton test later proved to be positive.

Pelvic examination revealed a hard nodular cervix which was dilated one finger. This bled easily even by gentle palpation with the examining finger. Manual dilatation was thought to be impossible due to the induration and lack of elasticity of the cervical canal. A Caesarean section was performed shortly after admission. The uterus was freely movable and it was noted that when opened at least a pint of thick, foul smelling pus was freed. A live female infant was delivered, the cervix dilated and uterus closed in layers. Drainage of pelvis and both gutters was instituted. The patient made an uneventful recovery aided by penicillin and streptomycin. Culture of pus proved to be staphylococcus aureus whereas at operation it was thought to be B. Coli. A biopsy of the cervix revealed a squamous cell carcinoma grade II and on August 20 was treated with radium preceded by X-ray therapy.

Patient's general condition became critical after returning home and she died of uremia, November 11, 1948.

Case No. 2, M. W., age 39, multipara III. Delivered by forced dilatation of cervix (Nov. 10, 1942) in another hospital with loss of infant. Patient had spotted throughout pregnancy and at term presented herself with a severe hemorrhage. She apparently

made an uneventful recovery but was seen by one of us at her home four weeks later complaining of severe loss of blood. Examination showed uterus slightly enlarged but fixed in retroversion with a hard nodular cervix which bled easily on the slightest manipulation, biopsy of which proved to be squamous carcinoma. Patient was transfused and X-ray treatment carried out—followed by radium therapy. Convalescence has been stormy but she is alive and physically shows no signs of recurrence at this time. Hinton test has remained positive.

#### DEDUCTIONS

The above presented illustrate many things which might helpfully be controlled by proper pre-natal care and with thorough preliminary examination.

First, a blood Wassermann and Rh should be executed for obvious reasons—whether the mother has had no previous pregnancies or whether a dozen conceptions have been experienced.

Second, a good bimanual examination is essential together with pelvic measurements and auscultation of the fetal heart.

Third, the cervix should not only be felt but should be visualized with a proper speculum.

Fourth, spotting should not be dismissed lightly during pregnancy as probably a marginal or low placenta attachment but the major possibilities of toxemia with premature separation, placenta praevia, blood dyscrasias, polypi and non-malignant tumors, and last but surely not least, carcinoma.

#### DISCUSSION

The two afore-mentioned cases are interesting in that they both presented positive Hinton tests and both had carcinoma of the cervix of the same type. The fact that the manually dilated patient is alive and her baby dead whereas the Caesarean treated mother is dead but her infant alive is of marked interest. Whether the presence of pus had any bearing on the fatal outcome following radium and X-ray treatment in case No. 1 is questionable, although it is well known that irradiation often causes an exacerbation of sepsis. It is noted that case No. 1 had a freely movable uterus and case No. 2 had a fixed retroverted uterus which would lead us to give a better prognosis on No. 1 than on case No. 2. Results, however, were reversed from the maternal standpoint.

\* Members of the Staff of Scott-Webb Memorial Hospital, Hartland, Maine.

Neither patient had prenatal care that one could be proud of. How many of us see our mothers-to-be, weigh them, take their blood pressure, examine their urine and dismiss them because we know they had a baby alright before so they can again?

Our State Law reads that a doctor shall take a blood test prenatally but does not say he must if the patient objects and provides no penalty if he does not, even though not objected to. All physicians handling confinement cases should make this a must both for babies' sake and for the good of the mother. Typing of blood whenever possible should be carried out as a precautionary measure.

Pregnancy should always be an indication to visualize the cervix and if bleeding occurs between the initial examination and term it should be visualized again as well as palpated with the examining finger. Auscultation, too, helps greatly in determining the position of the attached placenta and is an adjunct in determining placenta praevia or a low attachment.

What do we do if we have a suspicious cervix during pregnancy? This, of course, varies with the physician and the facilities at hand. Biopsy is not always applicable or prudent because of the possibility of disturbing the fetus by stimulating uterine contractions. We may, however, resort to the Papanicolaou method by obtaining smears, fixing them properly and referring them to a good cytologist. Where one has no access to a cytologist but a pathologist is available, he should resort to the gelfoam sponge method of Gladstone. Both these tests are failure in a very small number of cases—a negative smear does not rule out cancer. Nine out of 10 cases of carcinoma of the cervix or uterine body can be recognized by the smear and sponge methods, if these are taken correctly and the cytologist or pathologist are sufficiently experienced in reading them. When a test is positive, a tissue biopsy is in order to confirm the diagnosis before action is taken for treatment.

## Management of the Hemorrhage of Late Pregnancy

Vaginal bleeding near the end of gestation is always a complication to be feared unless one knows where the blood is coming from or what to do about it when the diagnosis is made.

The staff of our small country hospital (50-bed capacity) emphasizes the need of good obstetrical judgment with a resultant low mortality and morbidity because of their vigilance. Regardless of painstaking prenatal care, obstetrical emergencies exist in our group as they always will in every group. Most of us have learned the "hard" way, for we have no staff specialists per se in that every man has a general practice area to cover. We do, however, have an

The rapid growth of a neoplasm in pregnancy is very well known but few women should come to term with a neoplasm which interferes with delivery being unrecognized. If, however, this should occur and the cervix is suspicious at all, smears, sponge or tissue biopsy should be taken even as in earlier pregnancy.

As to classification and treatment of these lesions it is now generally known that the League of Nations sub-committee has chosen to classify carcinoma of the cervix in 4 stages for the purpose of prognosis and treatment.

Stage I: Where the growth is limited to the cervix and the uterus feels free on palpation.

Stage II: Where the neoplasm has extended into the vagina and possibly the parametrium but the uterus retains some mobility.

Stage III: The cancer has spread to the parametria with extension on one or both sides to the pelvic wall freezing the uterus partially or completely.

Stage IV: Metastasis to distant organs such as liver, etc.—spreading of lesions to intestines, vagina, and parametrium. The uterus is definitely fixed.

In the above classification, Stage I may be treated by radiation but surgery is becoming more commonly the accepted treatment of choice. Stages II and III radiation is the treatment of choice, by most gynecologists. Stage IV has almost a futile prognosis and for the most part radiation is the only treatment that should be attempted other than palliative medical. In our two cases the freely movable uterus was not the one with the best prognosis—the fixed pelvis seemed to respond better to treatment.

The purpose of this paper is not to criticize any one or group of doctors but to stimulate improvement in prenatal care in which the average practitioner is apt to be lax due to pressure of an overloaded schedule.

intelligent practice of obstetrics, some by choice, others by circumstances forced upon us. Finally, we all work together both in staff meetings and outside in our practice of obstetrics, medicine and surgery. We do not let petty jealousies and opinions conflict with our service to our community. The final result is a smooth running organization which is "up to date" though far from the medical centers of teaching and learning. We have to do what we can with what we have and in many instances our results seem to supercede those of our city brothers.

During the past few years we have compiled our obstetrical complications and frequently review them



with our staff. We justly feel that anyone can deliver a baby but can anyone cope with the emergencies that arise in the mass delivery of babies? Outside of postpartem hemorrhage we consider hemorrhage late in pregnancy of very serious consequence. Henceforth, the remainder of this article will be devoted to a discussion of the latter as considered and practiced in a rural community hospital together with signs, symptoms and etiology. Incidentally our maternal morbidity is .8% and mortality .0% in a period of 7 years as regards serious hemorrhage in late pregnancy.

Premature separation or abruptio placenta is by far the most common cause of prepartem hemorrhage in our area, due to the fact that our people do not, in general, have education and instruction that prompts them to have proper prenatal care. A toxemia is often well established when our men see them for the first time.

This condition is usually ushered in by a violent or hurried onset of colic type pains in abdomen, a history of trauma or signs and symptoms of toxemia, and a pattern of concealed or frank external hemorrhage per vagina. If the bleeding presents itself, it is usually continuous, with symptoms well beyond what they should be, for the quantitative loss of blood. The abdomen is usually larger than one would expect for a normal pregnancy and the uterus is tender to palpation and the fetal heart is often not heard due to death of the infant. Pelvic examination does not produce a palpable placenta and uterine contractions are usually absent. The patient is anxious, perspiring, and yawns frequently. The pulse is rapid, its volume depending upon the amount of blood lost. There is an invisible type of hemorrhage which also must be kept in mind and results from separation of the central portion of the placenta, the edges remaining adherent, or the placenta separates, the membranes retain their relation to the uterine wall and the blood escapes to the amniotic cavity by breaking through the membranes, or the head is pushed into the lower uterine segment and the blood cannot get by. The etiology of both types is thought to be due to toxemia or trauma. The latter being considered rarely of the external type. Internal trauma as a cause is not rare as exemplified by twin pregnancies—here the placenta often loosens with the first twin. In hydroamnios, one should be on guard for a separation, due to the sudden release of a large quantity of fluid and a resulting indirect force which causes the placenta to loosen from its attachment prematurely. When a cord is short, traction by pressure or otherwise may cause an early detachment as may manipulation of uterus, passage of bougies or the use of bags for dilatation.

Placenta Previa is a second cause of hemorrhage in late pregnancy. Here we have the placenta implanted in the neighborhood of the internal os. The

latter may be completely covered with placental tissue which is adherent to its margins or the placenta may encroach on and partly cover the os. Here the onset is quiet, with little or no pain. There are no signs of toxemia or history of trauma, the fetal heart is usually audible and a souffle is heard over symphysis. Symptoms of blood loss are proportional to the amount of external hemorrhage and pelvic examination reveals a boggy mass.

A third type of hemorrhage in late pregnancy is that of tumors, such as carcinoma and polypi and pedunculated fibroids. All of which should be recognized in a proper prenatal examination.

Fourthly, old lacerations of the birth canal often bleed at term.

We employ various forms of treatment for abruptio placenta which differ only as to the condition of the patient, the viability of the infant, and the onset of labor. When the patient is in labor and the cervix is dilatable we deliver from below by forceps or version—if dilation is risky we resort to Caesarean section aided by transfusion of whole blood pre and postpartem.

In Placenta Previa we also lean towards the Caesarean section but have employed the balloon method where the cervix is dilatable and in advanced cases forceps or version. We have found, as have many others, that the simple rupture of membranes in these cases often stops the bleeding—at the same time we pack the vagina. Here again, we combat the acute anemia with appropriate blood transfusions regardless of method used.

As to tumors—recently we reported 2 cases of carcinoma of cervix recognized at term. This, we believe is preventable, if proper prenatal care is instituted. Both cases cited had massive hemorrhage. They also had spotted throughout pregnancy. It is our contention that digital examination of the pregnant woman is not enough but the cervix should be viewed with a speculum early in pregnancy. If staining occurs during pregnancy one should not dismiss it lightly with the self assurance that it might upset the woman to examine again — she should be examined again and again until one is satisfied that he has made a diagnosis. We maintain also that if a suspicious cervix is viewed a gelfoam sponge biopsy (Gladstone method) or a Papernicolaou smear should be made with little or no inconvenience to the patient. If a positive result is forthcoming, treatment is based on the time factor. Discovered early some advise therapeutic abortion followed by radium, X-ray and surgery. Discovered late, pregnancy is usually terminated after viability of baby, followed by treatment of the neoplasm.

Old lacerations of the birth canal should be corrected if it is anticipated that they will cause hemorrhage at term — polypi and pedunculated fibroids

should always be remedied as a prophylactic measure.

In conclusion may we say that a good prenatal examination consists of more than taking the blood pressure and examining the urine. It should be thorough and should include auscultation and palpation externally. Pelvically it should not only be measurements and digital examination but a speculum of the proper type should be inserted and the cervix and lower birth canal visualized. If bleeding of any kind occurs during the pregnant period, this should be repeated, until one is satisfied with the diagnosis and a form of treatment planned and executed.

One of the fallacies taught us in our medical school careers was "always to do a rectal examination on a woman in labor." The poor student and the poor neophyte of practice is literally "scared to death"

when he gets into action because he was never taught to do a vaginal examination. We believe, that if the proper precautions are observed, a vaginal examination is not dangerous and is very profitable in determining the progress of labor and foretell incipient as well as actual emergencies. The rectal examination is, in our opinion, unfruitful from the instructive standpoint and it is not fair to send a young doctor into practice without some knowledge of the lower birth canal.

As to treatment of our emergencies we feel that we do not differ greatly from the generally accepted methods outlined in literature. We do not advise the wholesale handling of the above possibilities unless one has experience and a specialist is not available. It is well to remember that good judgment always outweighs poor results.

#### *Retrodisplaced Uterus—Continued from page 331*

If this is done then the uterus will stay in place in spite of time and numerous pregnancies.

9. Before closing the abdomen the routine removal of the appendix is advised. This procedure will eliminate any future operation for its removal and if any pelvic symptoms still persist after the suspension operation the blame will be placed where it belongs.

10. The nine routine procedures described above will cure 90% of the patients who are suffering from a simple displaced uterus and the ordinary simple complications. The 10% who are not cured are those in which the varicosities of the broad ligaments and the sclerosis of the arteries in the uterus and ovaries and tubes have progressed to such a degree that they will persist in giving pain even after a suspension operation. These cases will be cured only by a pan hysterectomy and double salpingo oophorectomy.

#### GROSS PELVIC PATHOLOGY:

1. If the tubes and ovaries are plastered down in the cul-de-sac they must be freed carefully by sharp dissection. If the tubes can be straightened out and they are patent and of normal size they can be left in with safety and they will not again prolapse and become adhered if the uterus is well suspended. If the tubes show enough pathology to necessitate their removal then the problem arises whether to remove the tubes and perform a suspension or to remove the tubes and ovaries and the uterus and cervix. Personally, I prefer the more radical procedure on patients who have had all the children they desire or who are at the menopausal age. On younger women desirous of children an attempt should be made to save the tubes or some part of them but if the pelvic pathology is due to gonorrhoea it is well to be radical.

2. As a rule there is little need for surgery on the ovaries after they are freed up unless they are heavy

due to cysts or endometriosis or fibrosis. In these cases it is well to resect enough of the ovaries for the complete removal of the pathology and to reduce the size so the weight will not cause them to prolapse again into the pelvis and adhere.

3. When the omentum is found tightly adhered to the pelvic organs and loops of adherent intestines are bound down beneath it, then it is necessary to free up the omental and intestinal adhesions by careful sharp dissection without leaving bloody injured serous surfaces. The omentum should be removed in its entirety by cutting it free from the border of the transverse colon. When this is done then the transverse colon will contract into the upper abdomen and it will not adhere because it takes two injured surfaces to produce adhesions. If the omentum is simply freed up and then dropped back into the abdomen it will again adhere to all the raw cut surfaces and the whole complex of intestinal symptoms will again occur.

4. When any gross pathology is removed from the pelvis it should be done with as little trauma as possible and care must be taken to peritonealize all injured serous surfaces in order to avoid post-operative adhesions.

#### SUMMARY

When the uterus becomes retrodisplaced it causes pathological conditions that sooner or later will cause symptoms. To cure these symptoms not only must the uterus be replaced and kept in the anterior position by a proper suspension operation but good drainage must be established from the uterus to the vagina and all the complicating pathology must be recognized and properly treated. Sometimes the pathology cannot be cured by conservative surgery and more radical surgery must be performed.



## EDITORIAL

### The Fall Clinical Session

The Fall Clinical Session of the Maine Medical Association was held in Waterville, Sunday and Monday, November 6 and 7. An excellent program was presented under the able direction of Dr. Frederick T. Hill and his associates.

Dr. Ralph J. Gampell, self exile from England's socialized medicine program, was the speaker at the opening session, Sunday evening, which was open to the public. Dr. Gampell said, "There are some things that are not worth doing at any price and working that sort of government medicine seemed so intolerable that I made this momentous decision to come to the United States." He is now interning at a San Francisco hospital in order to get a license to practice medicine in this country. He said that the general practitioner in England, under the socialized medicine program, has up to a maximum of 4000 patients to care for at a fee of \$3.40 each, adding that in the United States the national average is one doctor to every 1000 people. Dr. Gampell stated, "I didn't get out of England because I couldn't make a dollar. I was making about 10 per cent more than before the program was put into effect. But I had 3200 patients. I was making up to 36 house calls a day and seeing 60 more patients in three one-hour office periods per day. That's an average of one patient every three minutes."

He explained that the "scheme" did just what was expected. The illusion of "all for free" took hold and the "national hypochondriasis rate reached truly alarming proportions."

In speaking of leaving England, he said that it was a "hard thing to do—to leave your home, friends, and entire background" and go to another country and begin anew. "I hope none of us in this country have to make the same decision." "It would be an awful thing to have to pack and move on again. Because after this, there's no place left," he said.

Clinics at the Thayer Hospital, Sisters Hospital and Central Maine Sanitarium, were held Monday morning and afternoon.

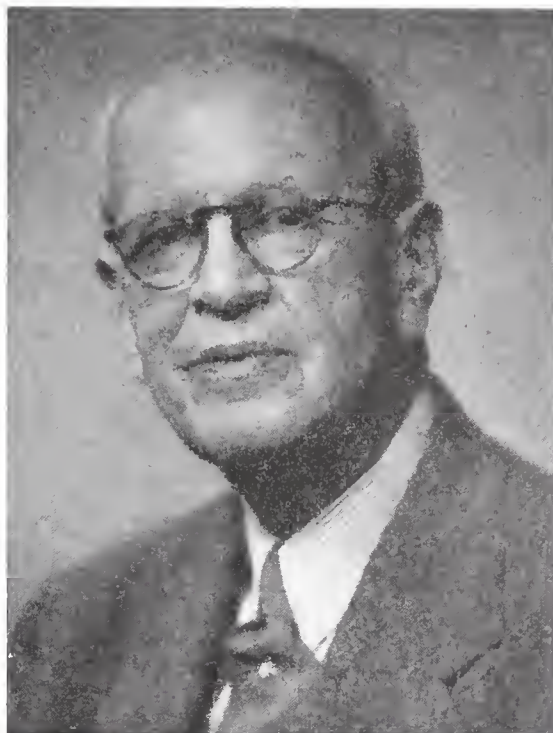
Dr. William S. Clark of the Massachusetts General Hospital, and Dr. Dwight E. Harken of the Massachusetts Memorial Hospital and Boston City Hospital, were guest speakers at the dinner meeting Monday evening.

A meeting of the Editorial Board of THE JOURNAL OF THE MAINE MEDICAL ASSOCIATION, a Council Meeting, and the Interim Meeting of the House of Delegates of the Association, were held Sunday morning and afternoon.

The House of Delegates met in accordance with a vote of the House in June, during the annual session. Twenty-eight of a possible thirty-seven delegates were present. The minutes of this meeting will be published, in part, in a later issue of the JOURNAL.

The Woman's Auxiliary to the Maine Medical Association met for a business meeting on Sunday, and on Monday listened to an address by Mrs. Harold F. Wahlquist, Minneapolis, Minnesota, first vice president of the Woman's Auxiliary to the American Medical Association.

## NECROLOGY

**E. Delmont Merrill, M. D.****1865 - 1949**

The death of Doctor E. Delmont Merrill, dean of Piscataquis County Physicians, occurred at his home in Dover-Foxcroft, on September 7, 1949. Dr. Merrill was born in Dexter, Maine, February 24, 1865, the son of Ithamar B. and Mary Toward Merrill. He was graduated from the Dexter High School, attended Coburn Classical Institute and was graduated from the Hahneman Homeopathic College in Philadelphia. In 1886, he opened an office in Dover and had practiced his profession there continuously up to within a short time of his death.

Doctor Merrill's practice literally began in the "horse and buggy" era. He travelled thousands of miles in wagon or sleigh through hub-deep mud and blinding blizzards to reach his patients.

He was a pioneer in Public Health work and was one of the foremost leaders and motivating forces of the Maine Public Health Association for many years, serving as its president during the years 1918-1924. His medical knowledge, coupled with his understanding of Maine people and the socio-economic factors of tuberculosis, plus the sincerity of his interest, made him a valuable member of that group.

He was active in many organizations, especially in the Maine Medical Association of which he was president in 1932-33.

He also served as president of the Piscataquis County Medical Association. In addition to the exacting duties of his professional work, Dr. Merrill found time to participate in civic affairs and by his skill as a public speaker, he had effectively championed many worthy causes. He was long an active Republican, working on town, county and state levels for his party and for three sessions represented his district in the State House of Representatives. He served as Speaker of the House during his third term. He was the oldest living member of Mosaic Lodge, F. & A. M., and also belonged to the higher Masonic bodies and to the Shrine. He was a charter member of the Dover-Foxcroft Kiwanis Club.

Doctor Merrill was first married to Lora May Dyer whose death occurred in 1935. He later married Marjory Waite Hall by whom he is survived. He is also survived by a daughter, Marian Dyer Merrill, and two sisters, Mrs. Ralph Hughes of Dover-Foxcroft, Mrs. Frederick Marsh of Dexter, and several nieces and nephews.

His career as a physician, a public official and in other capacities in which he served was distinguished by great ability and learning and by fidelity and devotion to duty. He was ever a good citizen, a devoted husband and father, and a friend to everyone.



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Secretary, Frank W. Kibbe, M. D., Rockland

### Lincoln-Sagadahoc

President, Philip H. Sylvester, M. D., Damariscotta  
Secretary, Neil L. Parsons, M. D., Damariscotta

### Oxford

President, Linwood M. Rowe, M. D., Rumford  
Secretary, Dexter E. Elsemore, M. D., Dixfield

### Penobscot

President, Henry C. Knowlton, M. D., Bangor  
Secretary, Herbert C. Scribner, M. D., Bangor

### Piscataquis

President, John B. Curtis, M. D., Milo  
Secretary, Norman H. Nickerson, M. D., Greenville

### Somerset

President, Albert J. Bernard, M. D., Skowhegan  
Secretary, H. Carl Amrein, M. D., Madison

### Waldo

President, John A. Caswell, M. D., Belfast  
Secretary, Raymond L. Torrey, M. D., Searsport

### Washington

President, Samuel R. Webber, M. D., Calais  
Secretary, Karl V. Larson, M. D., East Machias

### York

President, J. Robert Downing, M. D., Kennebunk  
Secretary, C. W. Kinghorn, M. D., Kittery

## COUNTY SOCIETY NOTES

### Androscoggin

A regular meeting of the Androscoggin County Medical Society was held at the Central Maine General Hospital on October 20, 1949, with 25 members present.

A committee consisting of Dr. Charles Steele, Dr. Paul Chevalier, and Dr. Robert Frost was appointed to cooperate with the American Diabetic Association in their detection campaign.

A discussion of the attitude of Senator Margaret Chase Smith to the question of compulsory health insurance was held. Several members who had received letters from her regarding her votes commented on the ambiguity of her stand.

Dr. Frank Broggi of Portland, then addressed the group, speaking on "Practical Aspects of Psychiatry."

A question period was followed by adjournment and refreshments.

IRVING I. GOODOF, M. D.,  
*Secretary.*

### Hancock

A regular meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, October 12, 1949.

Mr. W. Mayo Payson, Executive Secretary of the Maine Medical Association, addressed the group concerning the National Education Campaign of the A. M. A. Dr. Ralph A. Goodwin, President of the State Association, spoke relative to Socialized Medicine. Dr. Raymond E. Weymouth of Bar Harbor, reported on an unusual case of Tetanus.

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Lincoln - Sagadahoc

A regular monthly meeting of the Lincoln-Sagadahoc Medical Society was held at "The Days", Newcastle, October 18, 1949. Fifteen doctors were present.

Dr. Marian Ropes of the Arthritis Clinic, Massachusetts General Hospital, spoke to the group on "Cortisone, as the Latest Treatment for Rheumatoid Arthritis."

Moving pictures of cases before and following treatment with Cortisone, showed what a wonderful improvement is made by the patient while taking the hormone. However, she was not too enthusiastic as yet, claiming that it is still in the experimental stage.

NEIL L. PARSONS, M. D.,  
*Secretary.*

### Oxford

The annual meeting of the Oxford County Medical Society was held at the Bethel Inn, Bethel, Maine, on Wednesday, October 5th. The following officers were elected:

President, Linwood M. Rowe, M. D., Rumford.

Vice President, John A. Matheson, M. D., Bethel.

Secretary-Treasurer, Dexter E. Elsemore, M. D., Dixfield.

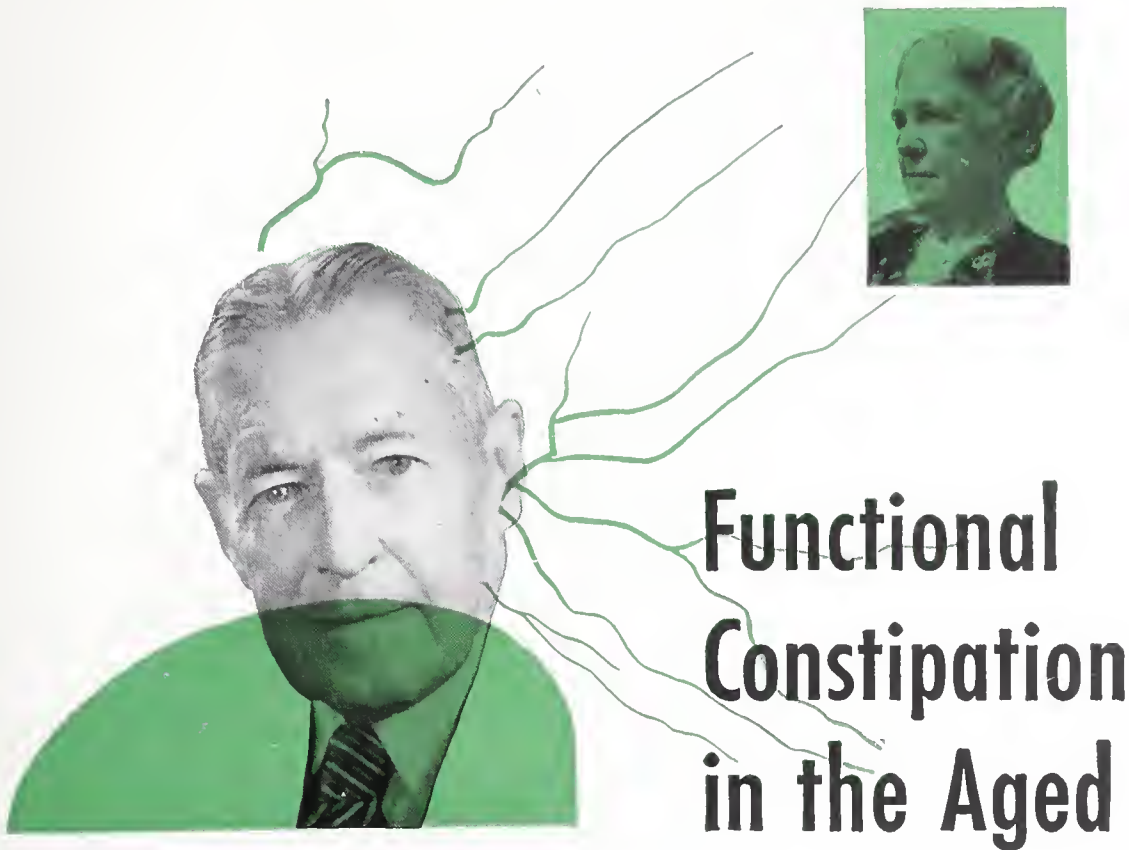
Auxiliary Committee on Legislation, Chesley W. Nelson, M. D.

Councillors: Roswell E. Hubbard, M. D., 1 year; Garfield G. Defoe, M. D., 2 years; Walter G. Dixon, M. D., 3 years.

Delegates to the Maine Medical Association: Walter G. Dixon, M. D., Norway, 1 year; John A. Greene, M. D., Rumford, 2 years. Alternates: John A. Matheson, M. D., Bethel, 1 year; D. E. Elsemore, M. D., Dixfield, 2 years.

A talk on "Recent Advances in Arthritis and Rheumatology" was given by Dr. Hans Waive of Boston.

DEXTER E. ELSEMORE, M. D.,  
*Secretary.*



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G. D. Searle & Co., Chicago 80, Illinois.

\*Werner, A. A.: The Climacteric in Women and Men, Postgrad. Med. 4:102 (Aug.) 1948.



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RESEARCH IN THE SERVICE OF MEDICINE

**SEARLE**



## Piscataquis

The annual meeting of the Piscataquis County Medical Association was held at the Hotel Greenville, Greenville, September 22, 1949.

Dinner was served to 22 members and guests.

Dr. Ralph A. Goodwin, President of the Maine Medical Association, gave an instructive talk. Mrs. Charles W. Steele, President of the Woman's Auxiliary to the Maine Medical Association, spoke to the ladies relative to the organization of a County Auxiliary.

The following Officers were elected:

President, John B. Curtis, M. D., Milo.

Vice President, Stanley G. Marsh, M. D., Guilford.

Secretary-Treasurer, Norman H. Nickerson, M. D., Greenville.

Delegate to the Maine Medical Association, Ralph C. Stuart, M. D., Guilford. Alternate, Guy E. Dore, M. D., Guilford.

Legislative Committee: Drs. Francis W. Bradbury, Howard C. Pritham, and Linus J. Stitham.

Board of Censors: Drs. Dore, Stitham and Harvey C. Bundy.

N. H. NICKERSON, M. D.,  
*Secretary.*

## York

A regular meeting of the York County Medical Society was held at the Old Orchard Country Club, Old Orchard, Maine, Wednesday, October 12, 1949. A fine steak dinner was enjoyed by those present; 28 members and three guests.

The report of the previous meeting was read and accepted.

The speaker, Theodore A. Potter, M. D., of Boston, gave a fine talk on "Advances in Rheumatology", and showed several X-ray pictures.

Drs. Marcel P. Houle and Andre P. Fortier, both of Biddeford, were elected to membership.

C. W. KINGHORN, M. D.,  
*Secretary.*

## NEWS AND NOTES

### Wytotitlock in Need of Doctor

A doctor is needed very badly in Wytotitlock.

It is a small town, with a population now of between four and five hundred.

However, there are bordering and nearby towns; combined population about nine hundred. Total population for the territory about thirteen hundred.

The mile radius from Doctor's Office:

Bancroft .....	3 miles
South Bancroft .....	5 miles
Drew .....	1 mile
Prentiss .....	7 miles
Glenwood .....	11 miles
Haynesville .....	18 miles
Macwahoc .....	16 miles

The people are prepared to offer a doctor his rent free for a year and perhaps could do a little more to help him to get started.

For further information write to Mrs. Annie Clifford, Wytotitlock, Maine.

### Pediatric Institute

On September 16, 1949, the first Pediatric Institute for General Practitioners was held at the Eastern Maine General Hospital in Bangor, Maine. This Institute was held under the sponsorship of the Maternal and Child Health Division, Department of Health and Welfare, and endorsed by the Maine Medical Association. Approximately 50 physicians from throughout the State attended. Dr. Albert W. Fellows, State Chairman of the American Academy of Pediatrics and chief of the pediatrics staff at the Eastern Maine General Hospital welcomed the group. Dr. Orvar Swanson, surgeon at the Children's Medical Center, Boston, spoke on "Surgery in Childhood." Dr. Edward C. Curnen, Jr., Associate professor of Pediatrics and Preventive Medicine at Yale University School of Medicine, spoke on "Infectious Diseases and Their Prevention," and Dr. R. Cannon Eley, Physician and Chief of Isolation Service, Children's Medical Center, Boston, spoke on "Infectious Diseases and Their Complications." A general discussion period concluded the Institute.

### Dr Ralf S. Martin Elected President Maine Heart Association

Dr. Ralf S. Martin of Portland, was elected president of the Maine Heart Association, at its organization meeting in Waterville, November 7th. The purpose of the association is research, informing the public on heart diseases, and the enlistment of public support in its program.

Other officers of the association are: Dr. Wilfred J. Comeau, Bangor, vice president; Mrs. John B. Glasier, Portland, secretary; and Raymond S. Oakes, Portland, treasurer.

Directors of the organization include Turner Jones, Dr. Edward A. Greco, and Dr. Eugene H. Drake, Portland; Dr. Charles W. Steele, Lewiston; and Dr. John O. Piper, Waterville.

### Tumor Clinics

Sisters Hospital, Waterville, Maine, 1st and 3rd Thursdays, 10.00-11.00 A. M., Richard L. Chasse, M. D., Director.

Augusta General Hospital, Augusta, Maine, 1st Monday, 9.00 A. M., Leon D. Herring, M. D., Director.

Bath Memorial Hospital, Bath, Maine, 2nd Tuesday, 3.00-5.00 P. M., Francis A. Winchenbach, M. D., Director.

Maine General Hospital, Portland, Maine, Thursdays, 10.00 A. M., Joseph E. Porter, M. D., Director.

Presque Isle General Hospital, Presque Isle, Maine, Thursdays, 10.00-12.00 A. M., Storer W. Boone, M. D., Director.

Madigan Memorial Hospital, Houlton, Maine, 2nd and 4th Wednesdays, 10.00-12.00 A. M., Joseph A. Donovan, M. D., Director.

Central Maine General Hospital, Lewiston, Maine, Tuesdays, 10.00 A. M., Waldo A. Clapp, M. D., Director.

St. Mary's General Hospital, Lewiston, Maine, Wednesdays, 3.30 P. M., Romeo A. Beliveau, M. D., Director.

Eastern Maine General Hospital, Bangor, Maine, Thursdays, 10.30 A. M., Magnus F. Ridlon, M. D., Director.

Thayer Hospital, Waterville, Maine, 2nd and 4th Thursdays, 10.00-11.00 A. M., Arthur H. McQuillan, M. D., Director.

# Proceedings

## NINETY - FIFTH ANNUAL SESSION

### Maine Medical Association

#### POLAND SPRING, MAINE

#### June 19, 20, 21, 1949

(Continued from the October issue of the JOURNAL, page 314)

GENERAL ASSEMBLY—JUNE 20, 1949

PRESIDENT FORREST B. AMES: This meeting is now called to order, at 4:30 o'clock.

This is the General Session of the Maine Medical Association, made up of the members of the House of Delegates and the members of the Association.

We have two items of business this afternoon. The first is in the nature of a social pleasure and obligation. The second is a matter of business of the Association itself.

I have the pleasure to present to you now, three visiting delegates from other New England States, so that you may give them a welcoming hand, and they will say a few words to us.

First is Dr. John H. Woodruff, of Barre, Vermont!

DR. JOHN H. WOODRUFF: Mr. Chairman and Gentlemen, I am very glad to be here. You know, I went to the old Maine Medical School in the days of Gerrish and Tobey and Thompson and Hunt, and Dr. Alfred Mitchell was my family doctor, when I was brought up in Brunswick. I am glad to get back to Maine.

I bring you greetings from the Vermont Society, and I want you to know that the boys are coming across in good shape with the \$25.00 assessment; they are pretty much in back of it, and they pretty much approve of what is being done at the present time. We felt at one time that people were antagonized too much, but I think that they are being educated, now, instead of being antagonized.

I am certainly glad to be here. [Applause]

PRESIDENT AMES: Thank you, Dr. Woodruff. Please take back to your Association the well wishes of the Maine Medical Association.

Next, I am going to call upon Dr. F. J. King of Woonsocket, Rhode Island.

DR. FRANCIS J. KING: Mr. Chairman and members of the Association, I can't go back quite as far as Dr. Woodruff can. My father was graduated from Bowdoin in 1900; I was graduated in 1921. But, I can remember Dr. Tobey, and I have already spoken to Carl Robinson.

I always get a kick out of coming back to Maine. And I did this time. I landed my plane at the golf course and somebody came up to me and asked me to move the plane up a bit, as he wanted to take some pictures for publicity purposes.

The Rhode Island Society wishes me to extend the greetings to the Maine Medical Association. [Applause]

PRESIDENT AMES: Thank you, Dr. King. It is always a pleasure to have you with us, I am sure.

Our next guest is Dr. Harold F. Morrill of Waterbury, Connecticut.

DR. HAROLD F. MORRILL: I am very, very glad to bring to you the greetings of the Connecticut State Medical Society. I might say that Dr. Stanley Weld, also a delegate, is here, but he seems to be missing right at the moment. I saw him a while ago, and he wanted me to extend his personal greetings, and that includes the both of us, from the State of Connecticut. [Applause]

PRESIDENT AMES: Thank you, Dr. Morrill.

Yesterday, we had the pleasure of greeting Dr. Samuel Proger, representing the Massachusetts Medical Society, so that we have now heard from all of our guests, except the representative from New Hampshire.

Is there a representative from New Hampshire present here? We shall be glad to hear from him at a later time, as he does not seem to be present.

The next item on our open session is the election of a President-Elect, and I now call for nominations from the floor.

DR. CLYDE I. SWETT, Island Falls: Mr. President, I submit the name of Dr. Foster C. Small of Belfast.

DR. FRANK A. SMITH, Westbrook: I will second the nomination. I think with the job that Dr. Small did here last year, and the job he does at home on municipal affairs, he certainly would make a wonderful President.

PRESIDENT AMES: Are there any other seconds to the nomination?

A MEMBER: I should like to second the nomination and say a word about Foster Small. I don't know as he is quite as old as I am, but we went to school together, and we put up with him for four years. Then, he came back to Maine, and we have had to put up with him ever since.

I want to say that everyone who has been associated with Foster, has been his friend and has admired him for his integrity and ability, and I just want to put my word in for a hearty second to the nomination.

DR. CHARLES W. KINGHORN, Kittery: Having practiced with the said gentleman, I would also like to second the nomination.

DR. GEORGE L. PRATT, Farmington: Mr. President, I move that nominations cease, and that Foster C. Small be elected by acclamation.

*This motion* was duly seconded and was carried.

DR. FRANK SMITH: Just so that it will be confirmed, I move that the Secretary cast the ballot for the election of Foster C. Small as President-Elect of this Association for the ensuing year.

*This motion* was duly seconded and was carried.

PRESIDENT AMES: The Secretary, having cast the ballot, I declare Dr. Foster C. Small duly elected as President-Elect of the Maine Medical Association for the coming year. [Applause] Foster, will you come up here and say a few words?

PRESIDENT-ELECT FOSTER C. SMALL: Mr. President, Delegates and Members of the Maine Medical Association and Guests, I want to assure you that this has been the greatest surprise in all my life. I further want to assure you that I consider it to be one of the highest honors ever bestowed upon me. I have served my city as Mayor, and in various other capacities, and I consider those to be honors, but I consider this to be a greater honor, and will endeavor to the best of my ability, with your coöperation and help, to do what I can to further the interests of the Maine Medical Association, to the benefit of the people of the entire State of Maine.

Thank you all very much! [Applause]

PRESIDENT AMES: This, now, concludes the items of business for this General Assembly.

I will now turn the gavel over to Dr. Goodwin, who will



call to order the Second Meeting of the House of Delegates.

[Whereupon, the General Assembly was adjourned at 4.55 o'clock in the afternoon.]

#### HOUSE OF DELEGATES

The Second Meeting of the House of Delegates of the Maine Medical Association was called to order by Dr. Ralph Goodwin, President-Elect, at five o'clock in the afternoon, on Monday, June 20, 1949.

CHAIRMAN GOODWIN: This Second Meeting of the House of Delegates will please come to order.

(The roll was then called by Secretary Carter. There were twenty-seven delegates present.)

CHAIRMAN GOODWIN: Our first order of business is the report of the Nominating Committee, by Dr. Delbert Stewart.

DR. DELBERT M. STEWART, South Paris: Mr. President, your Committee has met twice and has done considerable individual work, and have endeavored to ascertain something about the record of the Chairman of the various Committees, as to whether they have attended to their work or not, and we have also attempted to consider the geographical locations.

Therefore, your Nominating Committee wishes to make the following recommendations:

[Dr. Stewart then read the prepared report of the Nominating Committee which was published in the July issue of the JOURNAL, page 194.]

DR. STEWART: Your Committee wishes, further, to recommend that the Nominating Committee be appointed a little earlier.

CHAIRMAN GOODWIN: Thank you very much, Dr. Stewart.

You have heard the report of the Nominating Committee. I await your action for approval or disapproval of this report.

DR. FRANK A. SMITH: I move that the report of the Nominating Committee be accepted.

*This motion* was duly seconded by Dr. Cobb and others present and was carried.

CHAIRMAN GOODWIN: The next item on the agenda is the report of the Resolutions Committee by Dr. Foster C. Small.

DR. FOSTER C. SMALL: Mr. President, Fellow Delegates and Members of the Maine Medical Association, at yesterday's meeting, there was a resolution presented relative to the endorsement of the program of the American Medical Association. The Committee appointed to formulate the resolution was Dr. P. L. B. Ebbett, Dr. Wedgwood P. Webber, Dr. Frank A. Smith and myself. The resolution reads as follows:

The Maine Medical Association, at its Annual Session convened, does hereby unanimously resolve that it does approve and endorse the 12-Point Program of the American Medical Association for the improvement of the Health of the American people, and for the betterment of the distribution of medical care by voluntary and coöperative methods, in keeping with the American way of Life, and a free enterprise system.

And the Maine Medical Association does further unanimously resolve that it does vigorously oppose compulsory health insurance, as a long stride away from the American system of government towards a socialized society, and further because it would force upon the people an inferior system of medical care, at a greatly increased cost and a staggering tax burden upon the people.

And the Maine Medical Association does further resolve that this representation of opposition to a compulsory system of government medicine be made known to the President of the United States and to the Senators and the Representatives in Congress from Maine, by sending each of them a copy hereof.

CHAIRMAN GOODWIN: We have a Committee on Resolutions and a Reference Committee, I think that we had better

take individual action on each motion. I await your pleasure on the acceptance of this Resolution as read by Dr. Small.

DR. JAMES M. PARKER, Portland: I move that the Resolution be accepted.

*This motion* was duly seconded by several of the members present, and was unanimously carried.

CHAIRMAN GOODWIN: Next on the program is a report of the Reference Committee by Dr. Small, Chairman.

DR. FOSTER C. SMALL: I am going to give you a little résumé of what actually took place so that those who were not present yesterday will know what we are discussing.

Yesterday, it was moved that it was the desire of this House of Delegates to have a detailed report of the business to come before the Annual Meeting sent to each Delegate, at least two or three weeks previous to the Annual Meeting, along with the Annual Budget. Much discussion ensued. Later, it was moved that the Delegates of each section be notified sometime previous to the Annual Meeting (no definite date had been set in the motion), of the new business to be brought before the Annual Meeting.

Again, much discussion ensued. These motions were withdrawn. It was then suggested that an interim session of the House of Delegates of the Maine Medical Association be held during the Fall Clinical Session, in April, or whatever time deemed advisable.

Then it was moved and seconded that the House refer this matter to the Reference Committee for further discussion and recommendations, to be reported back to this House of Delegates' meeting today, for action.

Now, that will give you some idea of the problem with which we were confronted. From the inferences of those motions and discussions, it was evident that many members of the profession and the Delegates were not particularly or fully satisfied relative to information which might come up at the meetings of the House of Delegates, and the inference was also made that the Secretaries' meetings have not been held.

The present Constitution and By-Laws relative to the Council and also each Councilor and what their duties are, gives that information; I am well aware of the fact that another document will probably be presented today, which may change this entirely, but, the Association will, of necessity, act upon the business of the Association for the coming year.

Now, without a doubt, many of you are familiar with the duties of the Council and the duties of the Councilors, but for fear you may not be wholly familiar with them, I want to read them to you:

#### CHAPTER VI Council

SECTION 1. The Council shall meet on the day preceding the Annual Session, and daily during the Session and at such other times as necessity may require, subject to the call of the chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Association to organize. It shall make an annual report to the House of Delegates.

SEC. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and to keep in touch with the activities of and to aid in the betterment of the component societies of his district. He shall make an annual report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by each Councilor in the line of duties herein imposed may be allowed on a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. The Council shall be the executive body of the House of Delegates.

The Council shall be the Board of Censors of the Association. It shall consider all questions involving the right and



standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of component societies, on which an appeal is taken from the decision of an individual Councilor. Its decisions in all cases, including questions regarding membership in this Association, shall be final.

SEC. 4. Charters shall be issued to county societies only on approval of the Council, and shall be signed by the President and Secretary of this Association. Upon the recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 5. In sparsely settled sections the Council shall have authority to organize the physicians of two or more counties into societies, to be suitably designed so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 6. The Council shall provide for and superintend the issuance of all publications of the Associations, including proceedings, transactions and memoirs, and shall have authority to appoint an editor and such assistants as it deems necessary. It shall prescribe the methods of accounting and through a committee of three of its members, to be known as a Committee on Auditing and Appropriations, shall audit all accounts of this Association. The Council shall adopt an annual budget providing for the necessary expenses of the Association, which shall be prepared and presented for its consideration by the Committee on Auditing and Appropriations at the first meeting of the Council in June of each year. It shall submit an annual report to the House of Delegates, which shall specify the character and cost of the publications of the Association, the amount and character of all its property, and shall provide full information concerning the management of all affairs of the Association which the Council is charged to administer.

SEC. 7. The Council shall appoint, at least six months before the annual meeting, a committee, consisting of three of its members, to be known as the Committee on Arrangements for the annual meeting. On recommendation of this Committee the Council shall appoint a general chairman of a local committee on arrangements, who shall be a member of the component society of the county in which the annual meeting is to be held, and who shall appoint and organize from the members of this county society the personnel of the local committee on arrangements. The local committee on arrangements shall provide suitable meeting-places and shall have general charge of all local arrangements subject to the approval of the Committee on Arrangements for the annual meeting. All receipts accruing from the annual meeting shall be turned over to the Committee on Arrangements, and all expenditures made by the committee in connection with the annual meeting must be authorized in advance by the Committee on Auditing and Appropriations. Immediately after the annual meeting the Committee on Arrangements shall forward to the Treasurer any accumulated balance. Any deficit created on account of the annual meeting shall be met by the Council on recommendation of the Committee on Auditing and Appropriations.

SEC. 8. The Council shall by appointment fill any vacancy in office not otherwise provided for which may occur during the interval between annual meetings of the House of Delegates; the appointee shall serve until his successor has been elected and has qualified.

SEC. 9. The Council may employ an Executive Secretary, who need not be a physician nor a member of the Association.

SEC. 10. The salaries of all employees of the Association shall be fixed by the Council.

SEC. 11. The Council shall provide such headquarters for the Association as may be required to conduct its business properly.

You can see at first glance that the Council itself hasn't any authority to do anything over and above what is stipulated in there. Also, you can see clearly that the Councilors have a certain duty to perform; to work with the others. I can assure you, having been a member of the Council, that the Council has had no idea of imposing any régime upon you, as Delegates. That is your mission.

Now, after due consideration of those things, the first thing that was brought to our attention was the interim session of the House of Delegates of the Maine Medical Association, to be held during the Fall Clinical Session, in April, or whatever time it was deemed advisable.

We considered that, and we felt that we would advise that there be a meeting of the House of Delegates at the Fall Clinical Session, and also one the following April.

We also agreed, and advised, that each component society of the Maine Medical Association elect their delegates on or before January 31st of the year. Following that election of Delegates, the Councilor of the District shall call into conference the duly elected Delegates, and they, in turn, can render advice or criticism. The Councilor, then, can convey their wishes to the Council.

In other words, it gives an opportunity for the Delegate to return to his Society and discuss these problems, so that when he comes to the Annual Meeting in June, or the meeting in April, he will really be able to discuss things intelligently and the House of Delegates will be able to reach their final conclusions on many of these subjects that are controversial.

Another thing is this. Somebody may, with the best of interests at heart, want to start or promote some idea or system. It might step on somebody's toes, but not intentionally; therefore, I feel that if the delegates have an opportunity to talk to the Councilor and the Councilor has a talk with the Council, they can then go to the House of Delegates with all of the ideas, and many of these problems that might be controversial can be overcome, and that will, in the final analysis, be to the best interests of the Association as a whole.

So that that is our recommendation with reference to that point. We would recommend that the House of Delegates adopt such action, until such time as there is a Revision of the Constitution and By-laws.

CHAIRMAN GOODWIN: Thank you very much, Dr. Small. I await the pleasure of this House of Delegates on this report.

DR. ERVIN A. CENTER, Steep Falls: I move the adoption of those suggestions, as outlined by Dr. Small.

*This motion* was duly seconded, by several of the members present and was carried.

CHAIRMAN GOODWIN: We will continue with the report of the Reference Committee.

DR. FOSTER C. SMALL: The other reference that was brought to our attention was presented by Lincoln-Sagadahoc Counties.

The first one was: That the Maine Medical Association and its constituent members refuse to coöperate with the government sponsors of the medical plan.

Secondly; that the Maine Medical Association, through its Committee on Legislation, sponsor a bill for a compulsory smallpox vaccination.

The Reference Committee seemed to feel that at this particular time, any issue that would bring out marked discussion when we want close public relations would be detrimental to the best interests of all concerned in the Maine Medical Association.

As to the second resolution; they were inclined to think that it would be a fine thing; we all know that it would. But, again, it is more or less dictatorial, and is not, in our opinion, the logical thing to do at this time.

So that our recommendation to the Delegates is that no action be taken on these two resolutions at the present time.

CHAIRMAN GOODWIN: Thank you very much, Dr. Small.



Gentlemen, you have heard the report on the last two references. What is your pleasure on the acceptance of those recommendations?

DR. PRATT: Mr. Chairman, I move that the recommendations of the Reference Committee be adopted.

*This motion* was duly seconded by several of the members present and was carried.

CHAIRMAN GOODWIN: The next report is that of the Executive Secretary, Mayo Payson.

This report of my activities for the past year should be brief because, outside of a great deal of correspondence and other routine work in the office, a greater part of my effort has been working in connection with different committees and all of those committees will have here a more detailed report on which I do not need to enlarge.

It is particularly fortunate that the Maine Medical Association adopted a voluntary prepaid surgical and obstetrical care plan last June. Up to this point in the national campaign of AMA against compulsory health insurance two things have been stressed. One has been to try to tell the people of this country just what a national health insurance plan, or socialized medicine, will give them, and to prove to the people that you don't get something for nothing and that socialized medicine is invariably low-grade medical care. The second proposition has been to point out the desirability of budgeting medical care under an insurance plan, and, more particularly, under an insurance plan sponsored by some medical society. Maine would have been pretty lonesome in the congregation of states if it had not had a voluntary insurance plan.

After the House of Delegates accepted the Report of its Committee on Voluntary Insurance it was necessary in the office to contact every insurance company authorized to sell that type of insurance in Maine, advising them of what the doctors propose to do here, and invite them to underwrite the Maine Plan. A great deal of correspondence, many personal interviews and conferences with insurance companies resulted from this and does not need to be detailed here. It was also necessary to contact every doctor in Maine and urge his participation in the Insurance Plan in order to forward the success of the Plan. There have also been several meetings of the full Health Insurance Committee, many conferences with Dr. Drake, its Chairman, and with the various insurance people, who have given liberally of their time and experience to aid in making this Plan a success. These things do not need to be detailed but they have consumed a great deal of time.

The Public Relations Committee has done its work well. One conference was held by the full Committee with David Stevens, Health and Welfare Commissioner for the State of Maine, so that there might be complete understanding between the Committee and the Commissioner as to the impossibility of the State Department of Health and Welfare to meet medical care costs, as such, for old age recipients and other persons in a similar category.

At another meeting of the Committee plans were worked out for a Speakers' Bureau and that Speakers' Bureau was formed but at that time the purpose of the Committee was

not to furnish a large number of doctors who would be available to speak against compulsory health insurance, although two or three of the doctors did sign up on that subject. Generally, however, the purpose of the Speakers' Bureau was to have doctors available to speak on medical subjects to lay groups.

The Public Relations Committee undertook and carried through a plan for dissemination of desirable publicity material for the Midyear Meeting of the Medical Association in Portland and they hope that this work may be carried on.

There was a meeting of the Amy Pinkham Fund Committee and it is not surprising that very little can be accomplished in connection with this Fund. While the amount involved is \$20,000, two other organizations besides the Maine Medical Association, which felt that they were interested, have appeared in the Probate Court records in this matter. The present decree of the Probate Court limits expenditures to the income of the Fund, which is not very great. Unless some agreement can be worked out whereby the corpus of the Fund could be used for the purposes set forth in the will of the testatrix it does not seem probable that very much will be done.

As you know, Dr. Clyde Swett worked out a plan for training attendant nurses on which he spent almost unlimited time and which he explained and sold not only to the Maine Medical Association but to the Maine Hospital Association and the Maine Nurses' Association. This plan involved a course of one year's training for this type of nurse, to be handled through the Department of Education in normal schools at the beginning of the course, and later through the hospitals of the State, still under State supervision. For this reason the plan not only needed the consent and support of the different Associations, but it required support and an appropriation from the Legislature. I was involved in conferences with Dr. Swett and with Mr. Ladd, Commissioner of Education, and with representatives of the Nurses' Association to get this matter completely ironed out. Then it was, of course, necessary to draft and redraft legislation until the program was in form which met with the agreement of all the interested parties, particularly the nurses. Since the program called for a new appropriation, it, of course, failed in the Legislature because of lack of new taxation to supply the funds, the idea of the plan, however, was very well received by the Legislature, receiving a favorable report of the Committee and only the lack of funds defeated its passage. This proposition of Dr. Swett's to train these attendant nurses, practical nurses, whatever you choose to call them, is one which has caught on all over the country and is being pressed in many different states. There was an article in the *Saturday Evening Post* on this subject within a month and undoubtedly eventually the State of Maine will have some such program.

The other legislative matter sponsored by your Association had to do with increased appropriations, first for state aid cases in hospitals, for which at the present time the State pays slightly over \$4.00 a day or about one-third of the actual reimbursable cost of the patient to the hospital. \$600,000 a year was asked for; \$400,000 was the sum agreed upon by the Appropriations Committee, but this bill too was

*Continued on page XX*



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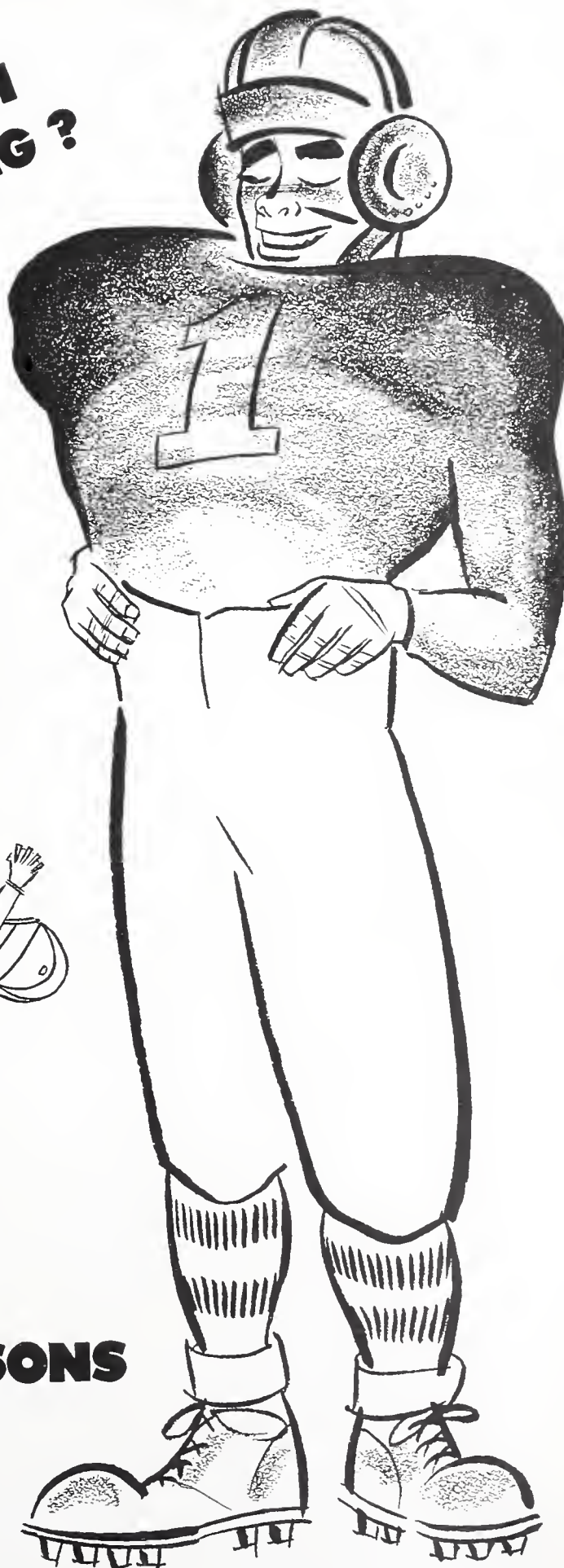
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lost because of lack of sufficient revenue. At least the subject had been brought so forcibly to the attention of the Legislature that in both the floor of the House and the Senate it was mentioned, along with needs in Old Age Assistance cases and the needs in education, as one of the outstanding reasons for increased appropriation and taxation. In this connection I would like to point out that a Bulletin was sent to every member of the Association outlining the Legislative program which your Association had adopted and stating that the program could not be passed unless there was new taxation to provide the revenue for it. Your organization at least was not in the ambiguous position of advocating increased appropriations and opposing new taxation, because no representations were made on behalf of the Maine Medical Association against proposed new taxes.

Your Association was also on record as favoring increased appropriations for the two State mental institutions, and for Pownal. These increased appropriations were, to a large extent, defeated for the same reason, although I believe the Augusta State Hospital got some needed additional money.

After the AMA meeting in St. Louis last November-December I traveled about the State quite a bit and also got out a Bulletin in which I explained, as far as I then had information, the purpose of the \$25.00 assessment made by AMA. The result of that meeting in St. Louis early last winter, of course, was a stepped up public relations program by AMA. To head it they hired the public relations firm of Whitaker & Baxter. After apparent intensive work for the next two months a meeting was held in Chicago on February 12th to explain to each State Society the program arrived at. Since that time, of course, a great deal of material in this campaign has been coming through from AMA. Dr. Martyn Vickers, of Bangor, is heading up the Committee on Education in this State. The organization of this Committee is now being completed and Maine will undoubtedly go forward with the other states in the distribution of literature, its dissemination not only to the doctors but

through the doctors to their patients. There will also be a campaign to secure endorsements of medicine's opposition to compulsory health insurance from other state and national organizations, and, finally, there will be a Speakers' Bureau of doctors and laymen, both well versed in the subject of compulsory health insurance, to speak against it and to urge enrollment in voluntary insurance plans under a free enterprise system. The somewhat negative campaign which has been stressed nationally up to this point to show what compulsory health insurance really is, its cost, and its failure, is about completed and has accomplished its purpose by preventing any favorable action in this Congress on compulsory health insurance. Now, however, the story of high quality medical care and the advance made in the preservation of life under a voluntary system of medical care, must be stressed. Beyond this, the AMA's 12-point program to help plug such gaps as exist in medical care must be explained in detail, and undoubtedly through the remainder of this year and early next year if President Truman carries this battle to the people in the Congressional elections the doctors of Maine and of every other state have got to be informed as to which of the candidates are their friends and which are enemies of free enterprise and they've got to do some real work to hold the line against socialism.

The revision of the Constitution and By-Laws, of course, required obtaining copies of similar documents from other state societies. From the study of these other Constitutions and By-Laws it is noticeable that a great deal of revision work has been done in the last few years. In my part of this work I took suggestions from the By-Laws of other states, or made suggestions of my own where the framework of the Medical Association seemed faulty. All these suggestions have been submitted from time to time to the Committee on this revision work and their report is already before us.

CHAIRMAN GOODWIN: Thank you very much, Mr. Payson. (To be concluded in the December issue of the JOURNAL.)

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## THE ORGANIZATION AND ADMINISTRATION OF THE EMERGENCY POLIO SERVICE\*

FRANK C. CURRAN, Bangor, Maine\*\*

Regularly, in the existence of any organized group of individuals, it becomes necessary to make decisions in order to solve a problem. Whether the problem to be resolved is of immediate acute nature or one anticipated in the future is of no great consequence when it is without precedent.

Such was the problem facing the medical profession and the Public Health officials of Eastern Maine early in the summer of 1949. Both groups were of the opinion that this area was due for a serious outbreak of poliomyelitis. The signs were particularly apparent to the health authorities. Several cases reported early in the summer, plus the prediction of a hot and dry season, no doubt alerted our staff.

The hospital policy that the Eastern Maine General Hospital would care for acute cases of polio had long been established and carried out. Until the 1949 season, however, the demand for such service and care was relatively slight. Our usual experience was from two to four cases at any given time. Such admissions had always been handled in the routine manner, patients being isolated as required. Private patients were, as usual, expected to select their own physicians from our staff, and the doctors selected assumed complete responsibility for treatment. Pa-

tients eligible for Ward Service were assigned to the Service involved, i.e. either Medical or Pediatric. This method was successful as long as the census of polio patients remained low.

During the first week of July, 1949, our census for polio was five patients, consisting of two on Pediatric House Service, one on Medical House Service and two on Private Medical Service. These patients were located on four separate areas, necessitating much extra effort in the way of nursing and physical therapy. Also at this time, it was evident that many of the referring doctors outside the immediate community were seeing suspected polio cases and were contacting our Visiting Staff for assistance in diagnosis and treatment.

A joint meeting of the Services was called to decide upon a course of action which would prepare us for the impending demand. As a result of this conference, certain recommendations for procedure in the handling of polio admissions, both positive and suspect, were accepted. A brief outline of the organization and the operation of the service is submitted below.

All patients in the hospital with confirmed diagnoses were transferred to a specially assigned nursing unit prepared for this purpose. This floor, primarily designed for contagious cases, consisted of eight

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\* Presented to Bangor Medical Club, October 25, 1949.

\*\* Director, Eastern Maine General Hospital.



single rooms, and had duplicate utility rooms — each with pressure autoclaves, etc. This area was ideally arranged and was completely isolated, yet was conveniently located for providing all necessary service.

The Polio Service was then created on a temporary basis to serve during the emergency period. A Visiting Staff member was named as Acting Head of this Service to function as the Chief. The Visiting Attending Staff of the Medical and Pediatric Services, together with the Resident Staff, were made available as a part of this new Service. The Health Officer of the City of Bangor was attached to the group. Any Visiting Staff member referring patients to the Polio Service was invited to become attached to the Service if he wished, in order to retain the private physician-patient relationship.

Regulations were immediately provided by the Service to cover routine practices of admissions, treatment, physical therapy, etc. Rounds were made daily, starting at 10:00 A. M., and all participating physicians and personnel adhered to these rules faithfully. The Specialty Services, called frequently in consultation, were exceptionally prompt and cooperative.

Patients referred to the hospital as polio cases were examined in a special examining room reserved for this purpose. If the positive diagnosis could be made at once, the admission was directly to the "Polio Ward." Questionable cases were admitted to "suspect" rooms in the care of the Polio Service and under strict isolation. If, after observation, a positive diagnosis was made, transfer to the "Polio Ward" followed.

During the outbreak we admitted approximately one hundred and thirty patients with positive diagnoses. The greatest number of admissions in any one day occurred during the last week in August, when twelve positive and two suspects were admitted from midnight August 23rd to midnight August 24th. The one suspect eventually proved to be positive.

The Eastern Maine General Hospital owns two respirators, and these units were activated early in July. Of the total admissions, seventeen cases were treated in iron lungs. At one time in the month of August we had fourteen respirators in operation at the same time. All of these cases were removed to segregated areas within the hospital.

As soon as it became apparent that more equipment would be needed, an urgent request was submitted to the National Foundation of Infantile Paralysis for assistance. This organization at all times during the entire period was most helpful and cooperative. Respirators and Hot Pack Machines were provided from the New England Pool maintained by the National Foundation. Local County and State officials were in daily contact with the Hospital authorities, seeking opportunities to be of assistance.

The Nursing Service provided for the Polio patients was set up after conference with the Polio Service, the National Foundation officials and the Hospital Administration. All personnel engaged were selected from the graduate level, and assignment to the Service was entirely voluntary. Although plans were made to provide Nurses and Therapists through Red Cross recruitment outside of the State, this program was not necessary because of the response by the local Nursing Profession. All Nurses were provided from volunteers on the Private Registry and from inactive Nurses responding to the appeal made to them.

When indicated, respirator patients were furnished special duty Nursing Service. As soon as advisable, patients were grouped to conserve nursing personnel. Such practice was most essential in order that the Nursing Service, furnished by approximately thirty graduate Registered Nurses, be properly distributed. In addition to the usual nursing duties, hot pack treatments, sometimes at hourly intervals, were carried out by the Nursing Staff in conjunction with the Physical Therapists. The Chief of the Service, selected from the Orthopedic Group, standardized the Physical Therapy treatments and this department supplied a real important share of the success of the Service.

Financial responsibility for hospitalization was assumed by the patient and by the National Foundation of Infantile Paralysis. Many admissions were covered by Blue Cross contract, and several patients benefited under the insurance plans currently available for Polio. The policy of the Foundation, as applied to our accounts, was generous. The hospital was paid on the reimbursable cost formula, and additional charges for special Nursing, etc., not included in the formula, were approved and paid.

Patients were discharged as soon as the Isolation Period was completed, if no further treatment was indicated or if hospital care was no longer required. Many were referred back to the Physical Therapy Department for care on an Out-Patient basis. If treatment was required and could not be arranged through the Out-Patient Service, transfer was made to the Hyde Home in Bath. Ambulance service from the Eastern Maine General Hospital to Bath was furnished by the National Foundation for Infantile Paralysis.

During the months of July, August and September, the community was naturally very much concerned and interested in the local situation. Information to the press and radio was channeled through one line of communication. This arrangement proved to be of value by keeping the reports circulated more authoritative and factual. Members of the Resident Medical Staff assigned to the Service were re-

*Continued on page 356*

## COORDINATION - COOPERATION VS. POLIO\*

CARL W. RUHLIN, M. D., Bangor, Maine\*\*

The 1949 epidemic of Infantile Paralysis in Penobscot County and the surrounding territories including Piscataquis, Hancock, Aroostook, and Knox Counties, was the most severe which has ever been encountered in the State of Maine, and has only been second to the 1916 epidemic, at which time transportation from one part of the state to another was interrupted, roads barricaded, and hysteria predominated the situation. This year, however, in spite of the severest epidemic in the history of the State of Maine, the picture has been entirely changed. The people, physicians, and especially the patients have assumed an attitude, that in spite of a severe incidence of Infantile Paralysis, the situation was well understood, and the patients were being adequately and well treated.

The incidence of Infantile Paralysis started early in Penobscot County and the first case was recorded in May of 1949, during which month there were four cases, all within the locality of Orono.

Having been warned previously by the National Foundation for Infantile Paralysis the local chapter for the Foundation was preparing itself for an incidence in the year 1949. This duly arrived as a severe tragedy, but luckily the situation was well taken care of by the efforts of the Penobscot Chapter of the National Foundation for Infantile Paralysis.

In June, the incidence of Infantile Paralysis was small, only two cases being recorded in Penobscot County, but this did not unarm the local chapter. They were fully prepared to cope with the serious situation when it did arrive in the month of July.

It was during the month of July that a large number of cases were about to be sent to the Eastern Maine General Hospital, and when these cases started to arrive it was decided that a Polio Service should be set up. This was determined by the heads of several services, and those especially interested included the Department of Pediatrics and the Department of Medicine. The Polio Service was set up, and at that time I was fortunate enough to be chosen Director of this special service during its time of emergency. It will be of interest to review the special Polio Service from its set-up and its activities.

The Polio Service was made up of a Director, a Resident from the Pediatric and the Medical Services, also a special Intern who was designated to aid in the treatment of Infantile Paralysis. The staff also

had on its service the Department of Physiotherapy, the Nursing Service, and the Chief of the Department of Health of the City of Bangor.

It was the aim and object of the Director to coordinate the services available for the treatment of the unfortunate victims of Infantile Paralysis in order that the death rate might be lowered, and the incidence of deformity minimized. It was important that the treatment would be adequate in all cases and should include convalescent care and rehabilitation which would be directed towards the benefit of the patient.

The residents and interns had the actual care of the patient under the supervision of the Director and it is to these men that the greatest amount of credit should be shown, because of the fact that the cases were well worked up, they were well diagnosed, and the proper treatment was instituted. Many new suggestions were offered by the residents and the interns. To mention two, there was the introduction of FURMETHIDE for atony of the bladder, and secondly, high elevation of the foot of the respirator for more complete postural drainage. And again these men watched the cases carefully and cautiously for the advent of unfavorable signs and symptoms which led the patient into the respirator. They were also responsible for the successful treatment of the respirator case, and finally responsible for the low incidence of death rate of respirator patients.

Consultants were often called in from other services, namely the Service for Ear, Nose, and Throat, the Surgical Service, and from the Service for the treatment of Genito Urinary Diseases. Because of the eight pregnancies on the Polio Service it was necessary to solicit the Obstetrical Service. These men were most responsive and most valuable in the final and ultimate outcome of the well being of the patient.

The Department of Physiotherapy was responsible for the supervision of physiotherapy, which was a modified version of the Kenney Treatment namely, hot packs, passive and active exercises, and muscle re-education. In many of the difficult respirator cases they carried out the actual work themselves in order to make sure that the respirator cases had the best care possible. The Department of Physiotherapy also made the necessary muscle checks, supervised the position of the bed patient, and instructed lay help in the proper method of application of hot packs.

Also attached to the Polio Service was the referring physician. The referring physician of any par-

\* Presented to Bangor Medical Club, October 25, 1949.

\*\* Assistant Attending on the Orthopaedic Service, and Chief of Provisional Polio Service, Eastern Maine General Hospital.



ticular patient was cordially invited to make rounds, make any suggestion, and visit his patient. This was specifically done so that the patient-doctor relationship would not be lost and the patient would still feel that he was getting the best possible treatment from his own physician.

Each and every man having a case of Infantile Paralysis wishing to refer it to the Polio Service at the Eastern Maine General Hospital graciously gave his patient over to the Service as this Service had dedicated itself to give the patient the best possible treatment available for the mutual benefit of the patient and his own physician. The Polio Service was set up for the specific reason that it was believed that coördination of treatment would result in the patient receiving the greatest benefit. This coördinated treatment was carried out by the aforementioned Polio Service.

At the time the Polio Service was organized the Hyde Memorial Home for Crippled Children and Adults, in Bath, Maine, was contacted and made available for the treatment of sub acute and chronic cases of Infantile Paralysis. The Hyde Home had the natural set-up possessing all the equipment for physiotherapy namely, the Hubbard Tank, hot pack machines, stationery bicycles, walking bars, etc., all of which are so necessary in leading the convalescent patient to the most successful outcome so that rehabilitation can be complete. Likewise the Hyde Home had adequately trained personnel including nurses, physiotherapists, occupational therapists, school teachers, and a recreational director.

The nurses and physiotherapists were specifically trained in Infantile Paralysis which enabled them to institute proper massage, and proper exercises. They also understood the use of all the special equipment. In order that the paralytic patient should not become depressed and thereby retard his treatment, he was successfully given occupational therapy by trained occupational therapists. The child went to school which was a most interesting part of the treatment. This teaching was carried out by accredited teachers in order that their schooling would not be interrupted. The ill person, especially the crippled patient needs recreation, and for this reason a recreational service was set up at the Hyde Home which enabled these patients to receive adequate recreation from outside and also recreation within the Hyde Home. Recreation was competitive in nature and instilled an interest in the crippled patient.

It can be seen from this set-up that the Eastern Maine General Hospital was successfully caring for the acute patient until the period of isolation was at its end, and then the patient could be treated successfully at the Hyde Home; and that this treatment would be uninterrupted. This set-up was ideal as it still kept the Eastern Maine General Hospital within

its jurisdiction of extending to the people in surrounding territories the necessary treatment to be given in the acute stage of any disease, and thereby did not enter the Eastern Maine General Hospital into the status of an institution treating chronic diseases. This status was carefully guarded and when a patient was not acutely ill, or when the isolation period had ended, he was immediately transferred to the Hyde Home where treatment was continued and uninterrupted.

One may spend much time on the acute treatment of Infantile Paralysis and it would be interesting to follow a case through the Polio Service to the sub acute stage up to the point of transportation to the Hyde Home.

A patient would enter the Eastern Maine General Hospital as a suspect of Infantile Paralysis and was admitted to the Out-Patient Department, at which time the resident was called. He was given a lumbar puncture and then examined. The Laboratory was most coöperative and the spinal fluid was immediately tested. Should the patient show the presenting signs of Infantile Paralysis and have a positive spinal fluid he was transferred to a Ward especially set up for the treatment of acute Infantile Paralysis.

Here the patient was put to bed on a mattress supported on boards, and placed in the position of rest with the feet supported. Special blocks were used and special foot boards employed so that the position of the patient would be comfortable and proper. Hot packs were instituted and passive and active exercises were carried out when the proper time arrived, that is to say when muscle soreness and tenderness had subsided. The hot packs were carried out by the Nursing Service who also supervised the general treatment such as bed care, bedside nursing, and the feeding of the patient. Very little outside voluntary help presented themselves to aid in the treatment and few were required to aid in the nursing of these patients.

If a patient showed upper arm involvement, chest involvement, or abdominal involvement, he was watched very carefully. He was carefully attended when feeding or drinking, and if he showed any increase in pulse or respiration, laryngeal or pharyngeal involvement, he was put on a caution list and placed close to a respirator. I believe that this is a main factor resulting in an extremely low mortality rate amongst the respirator cases at the Eastern Maine General Hospital.

The care of the respirator patient was a most difficult one as many of them had a loss of pharyngeal reflex and the swallowing mechanism was thrown out. These cases required careful watching as aspiration was necessary practically continuously so that the patient would not aspirate any regurgitated fluid or

any pool of mucous during the inspiratory phase of the respirator.

When these patients could not swallow it was necessary to institute catheter feedings directly into the stomach and this was done by the use of highly concentrated protein and glucose solutions. In order to keep up the fluid balance of the patient it was necessary to measure the output and give adequate fluids intravenously in the form of saline and glucose, also concentrated Vitamin B solutions were used.

The care of the bowel and bladder was essential and catheterization and enema was necessary in most of the patients. This is a most difficult procedure when working through small port holes especially when the machine could not be stopped due to the failure of the respiratory system of the patient.

The nurse had to be on the alert for any evidence of cynosis, pooling of mucous, regurgitation of gastric contents, etc. It was only through this alertness that life was saved by tracheotomy and by high postural drainage of the patients.

A total of seventeen respirator cases and only one death in a respirator case reveals the alertness and excellent nursing care delivered by the nurses of the Eastern Maine General Hospital and the graduates from other schools of nursing. Coöperation and alertness was the key word and this was the cause of the highly successful response of the patient to treatment. In no incidence were pressure sores reported and no case suffered from inadequate aspirations. Intravenous fluid lines and gastric catheters as well as urinary catheters were carefully watched. All these things contributed to the welfare of the patient. Nurses as well as residents and interns worked diligently and contributed highly to the success of the Polio Service.

When respirators were at a premium, Mr. Curran, the Director of the Eastern Maine General Hospital was able to secure respirators within a very short time and always had one stand-by respirator present to take care of a patient who sorely needed it. Mr. Curran also was able to be in touch with the representative from the National Foundation for Infantile Paralysis, and at no time was the hospital anything but most coöperative in obtaining respirators, nurses, and hot pack machines. The Director's office acted as the go-between between the Polio Service and the representative for the National Foundation for Infantile Paralysis.

The Director, Mr. Curran, was also responsible for the coöperation offered by the maintenance division of the Eastern Maine General Hospital, of which Mr. Hughes was in charge. Without added expense to the Service, Mr. Hughes was able to keep all the respirators running all the time, supervised the changing of the machines so that a patient would have the best machine obtainable for his particular needs. He

also supervised the running of new lines to the respirator service so that a minimal chance of failure was present. I cannot pass this important part of the Polio Service without mentioning the night when the electrical storm caused temporary failure of the power system to the respirator service. At this time Mr. Hughes had a stand-by crew which pumped the respirators by hand and kept the patients going until such time that power was restored and that the electricity was again running the machines. These are incidents which are not often mentioned but are an all important part of the Polio Service as it was set up. All consideration was given to the patient: time, energy, and expense was only secondary. This is a far cry from the epidemic of 1916!

I cannot pass into the more enlightening part of this paper without mentioning the Penobscot County Chapter of The National Foundation for Infantile Paralysis which has done such a marvelous job in organizing the Penobscot County Chapter into a going organization. It has raised sufficient funds to care for all patients in Penobscot County having Infantile Paralysis. For those who could not pay for the care of their difficulties, they were free to call on the Chapter for help, whether it be for acute care, transportation, convalescent care, rehabilitation, or the necessary apparatus to get them back to society as normal as possible. This Chapter has seen that no patient entering the Eastern Maine General Hospital shall suffer because of financial reason, and likewise the Eastern Maine General Hospital has felt secure that the money would be forthcoming for the care of these patients which included hospitalization, nursing care, physiotherapy care, and consultation treatment.

To all the doctors admitting patients, and to the residents and interns on the Polio Service I can only state that they have given their time, energy, and knowledge without thought of compensation; and as far as I know no man in this time of stress has accepted fees from any person or organization when the person entered the Polio Service. This is also true of the convalescent care and rehabilitation of these patients at Hyde Home. This speaks for coöperation and through coöperation these patients have received the best treatment obtainable.

The Health Department of the City of Bangor was an added adjunct to the Polio Service and deserves considerable credit. It was through Dr. Harry McNeil that the Polio Service was able to rapidly turn over their patients to the Hyde Home after he had successfully reduced the isolation period from 21 days to a period of 2 to 3 days following the afebrile stage. It is of interest to note that when the notice was publicized in the papers that New York had reduced their isolation period, the Polio Service of the Eastern Maine General Hospital with



the coöperation of Dr. Harry McNeil had ten days previous to this publication already reduced their isolation period to a few days following the afebrile stage. It was this type of coöperation which enabled the Eastern Maine General Hospital to keep their census of Polio patients much lower than had the isolation period remained at twenty-one days.

I trust that I shall not bore you with the following statistics which are most necessary in reporting the activities of any particular service. These statistics are unbiased and were taken from the records of residents and interns who we must appreciate as being most critical and accurate when attached to an interesting service. There have been a specific number of patients treated by the Polio Service at the Eastern Maine General Hospital and it is interesting to note that seventeen of these patients required respirator treatment and that there were eight pregnancies on the service. An attempt will be made to correlate figures which are necessary to determine the activities of the Polio Service but which figures, I fear, add nothing to the etiology of this disease as there appears to be no common factor present.

There are 106 records complete for study and it is these records that I have used for compiling the following data.

It is always interesting to note the presenting symptoms and the frequency of their occurrence in patients who are suffering from Infantile Paralysis.

Headache	83 cases	78%
Sore Throat	15 cases	14%
Vomiting	43 cases	31%
Muscle Spasm	84 cases	89%
Muscle Pain	102 cases	95%

It will be noted from the above presenting symptoms that they could all occur in any disease of an acute nature such as upper respiratory infection, or the prodromal symptoms of any contagious disease. The most typical symptoms were HEADACHE and MUSCLE SORENESS, and the most common sign was that of MUSCLE SPASM which prevented flexion of the chin. It was the above signs and symptoms along with a positive spinal puncture on which the diagnosis was made and the patient admitted to the Polio Service, with or without paralysis.

The temperature was not consistent. The average temperature was about 100 degrees. The highest recorded was the temperature of 104 degrees in an adult when admitted, and 103.4 degrees in a child when admitted. There was no connection between the temperature and the amount of paralysis, muscle spasm, or pain present.

A lumbar puncture was done on all patients suspected of having Infantile Paralysis and again it will be seen that no common denominator was present. The cell count ranged from the high of 1002 in a

patient with no paralysis to a normal count in a patient with paralysis. Possibly the reason for the normal cell count in the patient with paralysis was due to the fact that the spinal puncture was done fifteen days after the onset and because of his belated admission to the Polio Service. It seemed that the later the cell count was done in the course of the disease the nearer it approached normal. In one case which had a lumbar puncture done a few hours after the onset of the disease, the count was 310 and a second count fifteen days later showed the cell count to be 7 or within normal limits. It can be said then, that a normal cell count in the presence of paralysis does not rule out the possibilities of Infantile Paralysis, but on the taking of a careful history, the common signs and symptoms presented above may be volunteered, and the low or normal puncture can be accepted as being normal because it was done late in the course of the disease.

Poliomyelitis is still a disease which attacks the youth in the higher majority of cases, occasionally the very young, and only occasionally people of middle age.

The average age of the patients on the Polio Service was seventeen years. The youngest patient was four and one-half months, and the oldest fifty-nine years. It is interesting to review the number of patients in the different age groups, and they are as follows:

From 0 to 10 years	38 cases
From 10 to 20 years	33 cases
From 20 to 30 years	23 cases
From 30 to 40 years	9 cases
From 40 to 50 years	3 cases

It can be readily recognized from the above-mentioned figures that approximately 65% of the cases fall within the age group from 1 to 20 years. This is probably the only significant fact of the age incidence, that 65% of the cases occur before the 20th year.

The proportion of male patients to female patients is not too significant but it does attack males more frequently than females, and in this particular series of 106 cases there were 57 male patients and 49 female patients. When these were broken down into age groups it showed that between the 10th and 30th year more males were affected than females, and in the age group from 0 to 10 years, and during the 30th to the 40th year that the females predominated. The listing is as follows:

From 0 to 10	17 males	21 females
From 10 to 20	21 males	12 females
From 20 to 30	13 males	9 females
From 30 to 40	4 males	5 females
From 40 to 50	2 males	2 females

It was most interesting to study these 106 cases to determine the number of cases and the percentage of cases which had a definite paralysis, and the cases which had different extremities involved. In this particular series of cases 52 cases or 48% had definite paralysis which could be determined by clinical examination both from the standpoint of the physiotherapists and from the standpoint of the medical service attending these cases.

The different muscle groups can be listed as follows:

Involvement of Lower Extremity	36 cases or 35%
Involvement of Upper Extremity	26 cases or 25%
Both Upper Extremities	3 cases or 2%
Both Lower Extremities	10 cases or 9%
Both Uppers and Both Lower	1 case or .8%
Neck Muscles	2 cases or 1.6%
Laryngeal Involvement	2 cases or 1.6%
Pharyngeal Involvement	1 case or .8%
Facial Paralysis	2 cases or 1.6%
One Upper and One Lower	9 cases or 8%
Two Uppers and One Lower	1 case or .8%

No attempt was made to isolate the individual muscles paralyzed or the muscle group involved in this preliminary report.

In the report of these 106 cases, five were of the respiratory type with three complicated by cranial nerve involvement, making a total of eight spinal-bulbar type of paralysis. The remaining 98 cases were of the purely spinal type of paralysis, which means that they did not involve the center of respiration, the center of swallowing, or the center of vocal cord stimulation.

It was interesting to note some of the complicating signs and symptoms seen on the Polio Service in these cases of Infantile Paralysis. Five cases had bladder complications and were treated by FURMETHIDE, also by tidal drainage. Often times the FURMETHIDE would suffice or was used in conjunction with tidal drainage. As has been previously stated all of these cases recovered normal tone of their bladder.

Two cases had an uncontrollable back spasm with a severe lumbar lordosis and these cases under conservative treatment have fully recovered so that no permanent deformity of the spine has occurred. One case was complicated by Encephalitis resulting in severe restlessness, nervousness, anxiety, and severe muscle spasm. One case was recorded in the history to have had Diplopia. One case had severe uncontrollable diabetes with gastric bleeding. This case resulted in death which was not contributable to Infantile Paralysis.

The case with the complicating Encephalitis did very well and fully recovered. The case with Diplo-

pia recovered with no permanent disturbance. If the eight pregnancy cases can be considered cases of Poliomyelitis complicated by pregnancy it can be stated that these cases went along normally without any difficulty and the Polio did not disturb the pregnancy in any way and the pregnancy did not seem to aggravate the Polio. This seems a high incidence of Poliomyelitis among pregnant women and this may readily be a problem for future study.

A study of these 106 cases only confirmed what was already believed, that the heavy load of cases would come during the months of July and August and start falling off during the month of September. May presented four cases, June two cases, July twenty-three cases, August fifty-two cases, and September twenty-five cases. This has been the general run of the grouping of cases in the State of Maine according to the respective months, however, I recall one case of an acute upper respiratory disease which also had the presenting symptoms of Infantile Paralysis and resulted in the flail lower extremity of a child three years of age in a family of fourteen children, occurring in January.

It can readily be said that the majority of cases will fall within the months of July, August, and September in the State of Maine, but one should always be alert for the ever special case which may present itself during the winter months.

As has been previously mentioned it was the desire of the Polio Service to dispose of the cases as soon as possible in order that the Service could make room for new cases and not hold the old cases any longer than the required period set forth by the Health Department. Disposition of the patient was made depending upon his condition. If a patient needed further bed rest, needed strict supervision with special reference to gait and rehabilitation he was sent to Hyde Home. The cases with only mild paralysis or no paralysis were returned to their local medical doctor. Other cases which were ambulatory with involvement of an upper extremity were referred to the Department of Physiotherapy at the Eastern Maine General Hospital. A disposition of these 106 cases was made as follows:

Hyde Home	46 cases
Local Medical Doctor	50 cases
Department of Physiotherapy, Out-Patient	9 cases
Death	1 case

The cases referred to the Hyde Home are receiving further treatment. Many of them have now been discharged home to their local medical doctor. The patients in the Out-Patient Department at the Eastern Maine General Hospital are being followed at regular intervals by myself to check progress and to make new indications. The patient sent home to his local

*Continued on page 360*



## CLINICO-PATHOLOGICAL EXERCISE

## Case Presented at Eastern Maine General Hospital, Bangor, Maine

Edited by RICHARD C. WADSWORTH, M. D.\*

This 50-year-old white, male, unemployed woodsman was admitted to this hospital in September, 1949, with a three-day history of backpain, headache, weakness, nausea and vomiting. His illness began with a headache and lameness of his arms. The headache was of such severity that he was unable to sleep for three nights prior to admission. For twenty-four hours prior to admission he had had backache and pain in the left thigh and leg. For two days he had been unable to retain the food which he ate. On the day of admission he developed sore-throat and hoarseness.

A review of the patient's past history disclosed an attack of pneumonia followed by empyema in 1919. This was treated by surgical drainage. For the past four years the patient has had psoriasis and arthritis. The second finger of his left hand had been amputated by a power-saw.

System review revealed that the patient had had occasional wheezing with severe colds, has had moderate exertional dyspnea, a few attacks of orthopnea with "colds" and has raised about one-half cup of thin white sputum per day with no hemoptysis. There has been no chest pain on exertion and no ankle edema. During the past week the patient has had nocturia three to five times. There has been no pain, burning or hematuria. The patient has avoided greasy foods because of his psoriasis.

Physical examination on admission revealed a well-developed, well nourished man who appeared acutely ill. His temperature was 99.5°F. and his pulse 100 per minute. His skin showed extensive lesions of psoriasis. His pupils were constricted (the patient had received codeine). He was hoarse with a weak ineffective cough. He was unable to swallow well. Fluids were swallowed with difficulty and solids not at all. The neck was stiff. The throat was not inflamed. There was slight cervical lymphadenopathy. The thyroid gland was not palpably enlarged. Chest expansion was full and equal bilaterally. No abnormal breath sounds were heard. The heart tones were clear and the rhythm regular. There was a slurred first mitral sound. The abdomen was neither distended nor tender. There were no palpable masses. Abdominal reflexes were present. There was inability to raise the right arm and there was weakness of internal rotation. Other functions of the arm were present. The patient complained of pain in the left leg and thigh with some spasm but no demonstrable

weakness of these muscles. The tendon reflexes were slightly hyperactive bilaterally. No abnormal reflexes were noted.

*Laboratory Findings:* Urine straw-colored, cloudy, acid, 1.025, pH 5.5 and negative reaction for acetone and sugar. Urine albumin was .07gms. per 100cc. Microscopic examination of the sediment revealed frequent pus cells, frequent mucous threads, many epithelial cells and amorphous urates. Blood hemoglobin 16.5gms. per 100cc., W. B. C. 6,300 per cu. mm. Differential: 62 polymorphonuclear neutrophils, 5 bands, 31 lymphocytes and 2 monocytes.

A lumbar puncture on admission showed an initial pressure of 340mm. H<sub>2</sub>O. The Pandy test was negative. A cell count revealed 185 erythrocytes and 67 leucocytes per cu. mm.

*Course in Hospital:* On the day after admission, the patient was unable to lie flat in bed because of aggravation of back pain. During the day he had increased difficulty in swallowing and fluids by mouth were discontinued. His pain was not relieved by codeine and demerol. His vital capacity appeared to be diminishing. That night the patient was restless and uncoöperative. He responded poorly to sodium luminal and tried to sit up-right in bed. On the third hospital day his gag reflex appeared diminished but he was able to sip water with some difficulty. By this time involvement of the left arm was perceptible. The main dysfunction appeared to be in the deltoid, although detailed testing was not feasible. Intravenous fluids were administered. Later during the third day the patient became drowsy and was unable to perform simple problems in arithmetic. He perspired freely, was pale and his fingertips appeared blue. His respirations were deep but infrequent. He was placed in a respirator.

On the fourth day it was noted that the patient appeared to be fairly coöperative in the respirator although he did not coördinate well with its rhythm. If the respirator was turned off for a few minutes the patient became anxious and sweaty. Intercostal action was barely perceptible but definitely more on the left than on the right. The left diaphragm moved to some extent. There was no demonstrable motion on the right. The patient tried to speak, but was unable to phonate, even when out of the respirator. The palate moved sluggishly. The patient was able to expectorate forcibly but was unable to swallow. It was not difficult to prevent accumulation of mucus.

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His face appeared symmetrical. External ocular movements were well performed. The tongue protruded in the midline. The jaw moved symmetrically.

During the night of the fourth hospital day the patient became increasingly cyanotic and appeared moribund. External ocular movements became impaired. The right eye turned upward and outward. A slight left facial weakness was observed. Mucus began to accumulate more readily. Respiratory exchange without the respirator became very poor. The left eyelid became swollen with subcutaneous emphysema. The pulse was strong with a rate of 80 per minute. Although the patient's condition seemed to indicate medullary involvement rather than local obstruction to breathing, a tracheotomy was performed. The patient was put in a chestpirator. His color improved slightly after the tracheotomy and much more after the chestpirator was applied. The facial asymmetry persisted.

On the morning of the fifth day the patient's pulse became irregular and then became thready and weak. Cyanosis increased and the patient expired. The temperature rose terminally to 102.8°F.

*Discussion* (Dr. Richard C. Wadsworth): The foregoing history is that of the one fatal case of poliomyelitis autopsied at the Eastern Maine General Hospital during the 1949 outbreak. The post-mortem examination substantiated the clinical diagnosis of poliomyelitis. The first detailed histopathologic study of poliomyelitis was published by Otto Wickman in 1905.<sup>1</sup> Since that time there have been numerous contributions to our knowledge of the pathologic changes in this disease and to our understanding of the clinico-pathologic correlation of symptoms and lesions. In order to understand the sequence of events in this disorder it is necessary to derive some of our basic facts from the experimental production of poliomyelitis in monkeys. From the work of Bodian and Cumberland<sup>2</sup> we have learned that virus activity cannot be detected in the central nervous system until microscopic lesions are apparent. We have also learned the onset of virus multiplication in the central nervous system and that of the cellular pathologic reaction precedes the onset of paralysis by at least one day, and often several days. The earliest changes in an infected region of the spinal cord are chromatolysis of the Nissl substance in the cytoplasm of some of the nerve cells. These changes precede and are independent of the inflammatory cell changes which are always demonstrable in human autopsy material. The frequency of occurrence of different degrees of severity of chromatolysis indicate that this is a progressive change which in a period of hours may lead to complete disappearance of the Nissl substance. The progressive changes have been described in detail by Bodian<sup>3</sup> in experimental poliomyelitis in monkeys. He showed that

degenerative changes of the motor root axons were usually not demonstrable until several days after the onset of paralysis and that when the cell body is destroyed the axon undergoes typical Wallerian degeneration. In cases of severe paralysis the resulting muscular atrophy is apparent within two weeks after the onset of paralysis. He further demonstrated that changes in the nucleus began after cytoplasmic changes were readily demonstrable and that irreversible cell damage indicating necrosis of the cell is characterized by complete loss of cytoplasmic basophilia, disappearance of mitochondria, breakdown of neurofibrils, severe nuclear pyknosis, complete loss of nuclear basophilia, rupture of nuclear membrane, nuclear extrusion, cytoplasmic vacuolation, glassy appearance of the cytoplasm with peripheral retention of some Nissl substance, severe cellular basophilia and neuronophagia. In his paralytic animals he showed that over 90% of all motoneurons supplying the limbs were infected during the first few days of paralysis. If the changes in the nerve cells do not progress to irreversible changes they are slowly reversed during the course of four to six weeks so that after this time most of the remaining motoneurons are normal in appearance.

In the preparalytic stage there may be a perivascular accumulation of polymorphonuclear leucocytes and later of lymphocytes. During the period of early and increasing paralysis the lymphocytic cells predominate, although macrophages may be quite numerous. Perivascular lymphocytic cuffing may become more accentuated for the first week of the disease but by the end of three weeks they are largely replaced by macrophages. The lymphocytes, however, may persist for months after any demonstrable evidence of virus activity.

The pathology is not limited to nerve cell damage and perivascular infiltration of inflammatory cells. In the preparalytic stage a few granulocytes and lymphocytes may be found in the parenchyma of the gray matter, usually in association with damaged nerve cells. Later when nerve cells have undergone complete destruction they are replaced by neurophages. By the end of two or three days these cells disappear and are replaced largely by small cells with rod-shaped or irregular nuclei which have been variously called microglia or polyblasts of Maximow. By the end of two weeks macrophages may be found acting as phagocytic cells to clear up the debris. By this time many of the nerve cells have commenced returning toward normal. By three weeks many of them have assumed a normal appearance.

It is important to remember that these changes are practically never limited in distribution to the anterior horns of the spinal cord. Similar changes are found in the posterior and intermediate horns of the spinal gray matter. The neuraxis is usually involved up-



wards in the medulla, pons, midbrain, subthalamus and hypothalamus. It is characteristic of poliomyelitis that the cerebral cortex is spared except for lesions found in the motor cortex of the anterior central gyrus. The cerebellar cortex is regularly spared, although lesions are usually found in the roof nuclei of the cerebellum. The three centers in the brain most often severely affected are the reticular formation, the vestibular nuclei and the roof nuclei of the cerebellum. This definite distribution of lesions and sparing of certain parts of the brain is characteristic of poliomyelitis and is sufficiently uniform to distinguish the pathology of poliomyelitis from that of other virus diseases involving the central nervous system such as St. Louis encephalitis, Japanese B encephalitis, the various types of equine encephalitis, Russian Far-East encephalitis, Australian "X" disease and West Nile encephalitis.

The post mortem examination of the case presented above revealed extensive lesions of psoriasis. The third digit of the left hand was missing. A healed remote thoracic scar was noted in the left anterior axillary line. Both pleural cavities were obliterated by dense fibrous adhesions. Grayish "milk-patches" were scattered over the visceral pericardium. The heart weighed 462 grams. A small amount of atherosclerosis was present in the anterior descending branch of the left coronary artery. The lumen of this vessel as well as the lumina of the other coronary arteries showed no appreciable diminution in the caliber. There was a diffuse pneumonic process in the lower lobe of the right lung. The other lobes revealed little change. The spleen weighed 248 grams and was dark red-brown in color and moderately firm. The liver weighed 1809 gms. and showed moderate passive congestion without demonstrable cirrhosis. The brain weighed 1400 gms. The hemispheres were symmetrical with slight flattening of the convolutions and moderate congestion of the meningeal vessels. The arteries at the base of the brain were well preserved. Gross section of the brain showed no demonstrable alterations in the hemispheres but scattered small areas of hemorrhage could be distinguished in the hypothalamus, mid-brain, pons and medulla. No gross abnormalities were seen in the cerebellum. The most striking changes observed grossly were in the spinal cord. As multiple sections were made through various levels of the cord the edema was manifested by a moderate mushrooming of the cord, everting the substance of the cord over the edges of the enveloping pia mater. The gray matter of the cord could be readily differentiated from the surrounding white matter. The gray matter was of an orange-brown color with multiple small hemorrhages readily distinguishable. Although these hemorrhages were most numerous in the anterior horns they could also be seen in the

posterior horns. These lesions extended from the sacral to the upper cervical segments.

Sections from the spinal cord and various parts of the brain were stained with hematoxylin and eosin, cresyl violet, Loyez myelin sheath stain and the Bodian stain for axis cylinders. The histologic changes were quite similar at various levels and consisted of extensive destruction of nerve cells, marked perivascular lymphocytic infiltration, scattered areas of stromal destruction associated with some infiltration of rod-cells and microglia, interstitial and perivascular hemorrhages, occasional small areas of necrosis, scattered nodules of microglial proliferation and a moderate lymphocytic infiltration of the meninges. The distribution of the lesions is quite typical of the lesions of poliomyelitis. The most severe destructive lesions in the spinal cord involved the anterior horns of the gray matter. Similar but less severe lesions were observed in the posterior horns of the gray matter and in the intermediate horns of the thoracic cord. The perivascular lymphocytic infiltration was extensive throughout both gray and white matter and prominent about many of the meningeal vessels.

Sections through the medulla revealed marked destruction in areas scattered throughout the gray matter. The lesions were less wide-spread than in the cord and involved primarily the reticular substance of the medulla. The lesions in the medulla were not symmetrical. The left hypoglossal nucleus was almost completely destroyed, whereas the right hypoglossal nucleus remained intact. The vestibular nuclei were involved bilaterally as were the nuclei ambigu. The lesions in the pons and mid-brain were few and scattered. The destructive pontine lesions were most numerous near the midline. The perivascular lymphocytic infiltration was moderately marked and moderately wide-spread. The lesions of the hypothalamus were rare. Small areas of destruction with slight glial proliferation were seen. The perivascular infiltration was moderate. No lesions were found in the cerebral cortex, basal ganglia, temporal lobe or cerebellar hemispheres. Small areas of destruction were seen in the mid-line roof nuclei of the cerebellum.

It is impossible to demonstrate a mathematical correlation between the clinical symptoms in an individual case of poliomyelitis and the distribution and severity of the lesions found at post-mortem examination.<sup>4</sup> This may be due in part to our lack of knowledge of the number of cells required to maintain the physiologic activity of any one nervous center, in part due to our inability to accurately correlate anatomic and physiologic changes in nerve cells, and in part to our inability to clinically detect pathologic changes in a severely ill patient.

In this case certain clinico-anatomic correlations

appear plausible. The backache and headache which characterized the onset of this man's illness may be attributed to meningeal irritation associated with early meningeal exudate. The fever and rapid pulse are probably systemic manifestations of the virus infection. The sore throat, a frequent finding at the onset of poliomyelitis, might be the result of local virus invasion in the pharynx. The hoarseness and ineffective cough are to be associated with involvement of the vagus nucleus in the medulla while the difficulty in swallowing may be explained by lesions of the vagus nuclei and the nucleus ambiguus supplying the ninth, tenth and eleventh cranial nerves. The damage observed in the hypoglossal nucleus may have been associated with some loss of power in the tongue which was not observed clinically. The weakness and lameness of the arms noted at the onset of the illness may have been manifestations of a generalized toxicity but were probably indications of early, at that time reversible, injury to the anterior horn cells in the cervical spinal cord. The paresis of the right arm and later of the left deltoid were undoubtedly related to damage of anterior horn cells in the cervical cord. The pain in the left leg and thigh may have been due to local ischemia or may have been due to lesions in the posterior root ganglia or lesions involving fibers entering the cord from the posterior root ganglia. The spasm in the leg muscles and the active tendon reflexes can be attributed to the release phenomena associated with lesions in the reticular substance of the medulla and pons.

The diaphragmatic paresis can be attributed to injury of the cells of origin of the phrenic nerve in the anterior horns of the third, fourth and fifth cervical segments. The intercostal paresis may be partially attributed to injury of the cells of origin of the cervical nerves supplying the scalene muscles in the third to eighth cervical segments. The cyanosis and difficulty in respirations were probably due to involvement of the lateral ventral reticular substance (respiratory center) of the medulla oblongata. The drowsiness may have been associated with damage to the nerve cells of the hypothalamus. The left facial weakness indicates virus invasion of the seventh cranial nerve nucleus. The impairment of external ocular movements were undoubtedly due to involvement of the third and possibly of the fourth and sixth cranial nerve nuclei. The decreased gag reflex may have been due to injury of the motor cells giving rise to the ninth or tenth cranial nerves or to injury of the nucleus of the tractus solitarius.

It is felt that the death of the patient was due primarily to marked involvement of the reticular substance of the medulla and that the pneumonic process in the right lower lobe was an important secondary contributing factor.

No attempts were made to obtain material for virus

study. It is believed that the character and distribution of the lesions in this case are pathognomonic of acute anterior poliomyelitis.

Recently there have been described cases occurring during epidemics of poliomyelitis which have been shown to be due to another virus.

In August, 1947, Dalldorf and Sickles<sup>5</sup> from the New York State Department of Health in Albany were studying several small epidemics of poliomyelitis in upstate New York in an attempt to find a mouse-adaptable virus. From the feces of two children in one outbreak they were able to recover a virus which would induce paralysis in suckling mice and hamsters. A remarkable feature of their studies was the fact that the paralysis in the experimental animals was associated with destructive lesions of the skeletal muscles while the central nervous system remained unaffected. They were able to demonstrate neutralizing antibodies in the convalescent serum of both patients.

This report from the Albany group was soon followed by an interesting report from New Haven where Melnick, Shaw and Curnen<sup>6</sup> obtained a virus from the feces of five patients with illnesses resembling non-paralytic poliomyelitis or so-called aseptic meningitis. They also recovered this virus from two patients diagnosed as "fever of undetermined origin." These seven cases occurred in Connecticut and Rhode Island during the summer and fall of 1948. The properties of this virus were the same as those of the virus isolated in Albany. Neutralizing antibodies were demonstrated in the convalescent sera of all seven of the patients from whom the virus was isolated. One of the New Haven workers developed an accidental infection while working with this virus. His illness was characterized by fever of eight days' duration and a slight stiffness of the back, but no definite central nervous system symptoms. The virus was recovered both from the nasopharynx and feces of this worker and they were able to demonstrate the presence of neutralizing antibodies in his convalescent serum.

With increasing knowledge of the virus diseases a precise etiologic diagnosis of the virus diseases becomes increasingly difficult. There are at least three distinct types of viruses which are known to cause poliomyelitis. At least fourteen strains have been isolated of which four belong to the Lansing type, nine to the Brunhilde type and one to the Leon type. The Lansing type of virus is characterized by its ability to produce paralysis in rodents as well as in primates. This type has been transmitted to monkey, mouse, cotton-rat and hamster. Identification of these viruses is a complicated laboratory procedure which requires elaborate laboratory equipment and highly trained personnel. The exact diagnosis of virus infections by identification of the etiologic agent



remains a function of exceptional laboratories engaged in virus research.

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#### *The Organization and Administration of the Emergency Polio Service—Continued from page 346*

sponsible for keeping the relatives informed as to the progress of their patients. The usual practice was daily communication, either by phone or by personal interview at an appointed time. This arrangement was very satisfactory, as the relatives received their information from a Doctor and were more assured than had the information been furnished by others.

The Hospital Engineering Department was attached to the Service, and mechanical maintenance of respirators and hot pack equipment became the function of this Department. Electrical wiring was replaced in certain instances, and it was necessary to develop in certain instances new lines to provide for heavy duty heating elements, suction machine motors, respirator motors, etc.

In reviewing our experience, we believe the patients treated by the Polio Service received the best possible Medical, Nursing and Hospital care available. The uniformity made possible by this type of organized and coördinated effort permitted us to furnish this service at a relatively low cost. Hospital facilities and personnel were utilized in a manner that was somewhat of a departure from the usual custom. The change did not interfere with the Private Patient-Physician relationship, while it made available to the profession the experience and knowledge of the entire Service.

We believe that the practical application of the old adage, "Two heads are better than one," is demonstrated by this type of integrated service.

## CLINICAL EVALUATION OF A NEWER ANTI-HISTAMINIC CHLOR-TRIMETON†

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In this day when new drugs are being placed before the physician at such a rate that the place they have in our armamentarium cannot possibly be evaluated, it seems worthwhile to go slow in our acceptance and to restrict their use to those conditions where known value is indicated.

New anti-histaminic drugs are a group which are being presented in actually tremendous numbers so that even one whose interests are confined to a specialty where their use is important, has difficulty trying to have adequate knowledge of all of them.

Previous to the onset of the past fall pollen season, we were privileged to use clinically one of these new drugs — chlor-trimeton. Its use in our hands was

restricted to the severe and moderately severe seasonal hay fever patient who had already been showing hay fever symptoms.

Our interest was aroused in this drug for several reasons which shall be mentioned briefly. (1) The dose was considerably smaller than any other anti-histaminic we had used by as much as ten times. This would seem to make it much less toxic. (2) The lethal dose in animal experimentation was high, and (3) the therapeutic index was high.

Forty patients were used in our series and these, as previously mentioned, were of the severe or moderately severe type already showing symptoms. The clinical evaluation of the drug was based (1) on the patient's statement of his condition, and (2) answers to pertinent questions. The following chart indicates the dose given each patient and the result is indicated under appropriate headings. The following chart indicates dosage and clinical results.

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† Material for this experiment furnished through the courtesy of Schering Corporation.

Patient	Dosage	Excellent Result	Markedly Improved	Improved	Poor to No Benefit	Toxic Symptoms
L. S.	2 mgm. tid	x				
C. S.	2 mgm. tid	x				
I. H.	2 mgm. tid			x		dizziness
D. M.	2 mgm. bid	x				
M. H.	2 mgm. bid				x	
R. H.	2 mgm. tid	x				
J. H.	2 mgm. tid	x				
J. M.	4 mgm. 4id			x		
G. B.	4 mgm. tid			x		
M. B.	2 mgm. bid			x		
C. L.	2 mgm. tid		x			
A. D.	2 mgm. tid			x		
S. F.	2 mgm. bid	x				
W. C.	2 mgm. tid	x				
C. B.	2 mgm. 4id			x		sleepiness
E. K.	4 mgm. 4id				x	
E. C.	2 mgm. tid		x			
W. G.	2 mgm. tid	x				
L. C.	4 mgm. tid			x		
B. R.	2 mgm. tid		x			
L. M.	2 mgm. tid		x			
D. S.	2 mgm. 4id			x		
D. SL.	2 mgm. tid		x			
L. N.	2 mgm. } tid 1 mgm. }			x		anxiety*
E. W.	2 mgm. tid			x		
B. B.	2 mgm. tid			x		
R. W.	2 mgm. tid				x	
L. J.	4 mgm. tid			x		
J. Mc.	2 mgm. bid			x		
R. A.	2 mgm. bid	x				
G. B.	4 mgm. tid	x				
R. C.	2 mgm. tid			x		
B. M.	2 mgm. tid		x			
D. T.	2 mgm. tid		x			
I. C.	2 mgm. tid		x			
D. B.	2 mgm. tid		x			
C. S.	2 mgm. tid		x			
B. B.	2 mgm. 4id			x		
K. B.	2 mgm. tid			x		
F. H.	2 mgm. tid		x			

\* Central nervous system stimulating action.

Conclusions to be drawn from chart :

- 1. Optimum dose from 6 mgm. to 16 mgm. per day—in divided doses.
- 2. Ten patients received excellent results.
- 3. Eleven patients were markedly improved.
- 4. Sixteen patients were improved but three of these had to stop the drug due to toxic symptoms.
- 5. Three received no benefits.

If we add the *three* stopped due to toxic symptoms and the *three* who received no benefit, our series

shows: 15% of patients were total failures; 32% were improved ; 52% excellent to markedly improved. From this series it would seem to be possible to draw the following conclusions :

- 1. Low toxicity in 7½% of the patients.
- 2. If one groups all cases from markedly improved to excellent, approximately 52% would fall into this group. A breakdown of this is found in the previous paragraph.
- 3. In our experience, this is one of the better anti-histaminic drugs in use today.



## CERVICITIS

DONALD COULTON, M. D., Bangor, Maine\*

Cervicitis in one of its many forms is probably the most common gynecological condition. In parous women it is so common that it is often passed over as one of the expected sequelae. This attitude greatly under-rates its actual significance. Many of the intermediate and late puerperal pelvic symptoms besides leukorrhea are chiefly due to cervicitis. In sterility problems, especially of the secondary type, it ranks second only to tubal causes among pelvic factors. And finally its relation to eventual development of carcinoma of the cervix is sufficient reason alone to regard cervicitis as a lesion of primary consequence.

Although childbirth plays a major role in the onset of cervicitis, other less obvious predisposing factors are usually present. Normally the endocervical mucosa is influenced in its function by the estrogen-progesterone balance and undergoes minor cyclic changes as regularly as the endometrium. Hormone imbalances, particularly those resulting in a high estrogen concentration accentuates these changes producing hypertrophy and edema of both the glands and the mucosa. This is especially apparent clinically in pregnancy when along with the increased vascularity and congestion, the high estrogen levels produce a soft boggy cervix, which rapidly subsides in the first few weeks postpartum with the re-establishment of a normal estrogen-progesterone balance.

Vaginal pH is also of importance in the maintenance of a normal cervix. Alkalinity of the vagina causes a loss of glucose content of the squamous epithelium and tends to produce maceration, predisposing to true erosion and bacterial invasion. Clinical erosions frequently appear temporarily or become worse shortly following menstruation. This can be interpreted as the result of a physiologic disturbance of the vaginal pH by the menstrual blood which also serves as an excellent media for bacterial growth. This is particularly true of multiparae with relaxed vaginal supports which allow some stasis of the menstrual flow in the vagina.

Bacteriologically the commoner invading organisms in order of frequency are staphylococcus, streptococcus, B coli and the gonococcus. It bears emphasizing, however, that bacterial invasion, with the exception of the gonococcus, is secondary to and aided by disturbances in physiology or cervical trauma. The infection rapidly passes through the acute phase and becomes a chronic smoldering affair with acute or subacute exacerbations. The foci of

this chronic infection are deep in the bottoms of the racemose glands of the endocervix beyond the reach of surface applications.

Symptomatically, leukorrhea either persistent or intermittent, is the commonest, although often this is ignored by the parous patient due to the erroneous belief that a discharge should be expected after having children. The discharge varies considerably both in type and quantity. During a quiescent period it is only moderate in amount, milky-white, viscous and very tenacious, while in exacerbations of the infectious element it may be profuse, yellow or greenish-yellow and malodorous, the latter often being the chief complaint. Leukorrhea of both types is often associated with sterility produced either by chemically unfavorable and toxic cervical secretions or mechanically. The greatly increased viscosity of the secretions acts as a barrier to the sperm which remain trapped in it. This can be verified by the Huhner test in which the sperm will be seen to be motile but unable to progress in normal fashion through the secretions.

There may be associated vaginal spotting and an increase in menstrual flow both in daily amount and duration from oozing or more profuse bleeding of the eroded areas of the cervix. Dysmenorrhea also occurs through irritation of the nerves around the internal os by the chronic infection in the endocervical glands.

Chronic low backache sometimes radiating to the thighs is probably the second most common symptom arising either from what some authors term "broad ligament neuritis" or from chronic lymphatic congestion and chronic pelvic lymphadenitis. Lymphatic drainage of the cervix runs in three directions: posteriorly through the uterosacral ligaments to the common iliac glands, transversely and postero-laterally through the broad ligaments to the external iliac and hypogastric glands, respectively. The backache can be reproduced by pressure or tension on the uterosacral ligaments. Pelvic congestion, cervical edema and eventual fibrosis in long-standing cases may enlarge the cervix to two or three times its normal diameter and is the source of a sensation of pelvic heaviness.

Clinically and therapeutically it is convenient to classify cervicitis into three groups, depending on the degree of involvement. The first group may be called "simple erosion" and is characterized by a bright red area of variable size about the external os, usually covered by columnar epithelium and showing some evidence of inflammation. It is most commonly seen

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in the first six weeks postpartum and as the so-called "congenital erosion," which probably results from hormone imbalance with a predominating estrogen concentration. A large portion of these cases resolve spontaneously. Daily vinegar douches are helpful in hastening their resolution by improving vaginal acidity and removing excess secretions. Simple erosions persisting longer than six weeks should be treated by electro-coagulation.

The second group may be called "erosion with eversion" differing from the first group by the rolling out or prolapse of the endocervical mucosa as the result of edema. These cases are either more chronic than the first group or have a greater infectious element present. Douches alone are inadequate in effecting a cure or at best only temporarily allow the area to heal, with early recurrence after discontinuing the douches. These cervixes should be electro-coagulated. Following coagulation, the use of a buffered acid vaginal jelly is advisable beginning on the third day and continued until the area is thoroughly healed. Buffered acid jellies are more effective in maintaining vaginal acidity than vinegar douches, the acid of which is more or less rapidly neutralized by the alkaline cervical secretions. The slough of coagulated tissue usually comes off between the sixth and tenth following days during which time the patient should be warned to expect a profuse, odorous discharge, the result of the necrosis produced by coagulation. Silver nitrate may be used during the healing process thereafter to remove any excessive granulations. Eventual healing is by epithelization.

The third group may be called "erosion and eversion associated with cervical laceration and/or Nabothian cyst formation." Cervical lacerations not only readily expose the endocervical glands to vaginal contamination and hence infection, but in the process of their healing many of the gland mouths will be walled off by fibrous tissue and edema, producing Nabothian cysts and deep pockets of chronic infection. Any surface therapy and even electro-coagulation fails to go deeply enough throughout the length of the cervical canal to clear this type of cervicitis. The whole cervix becomes elongated, markedly enlarged in diameter and a constant source of chronic pelvic lymphadenitis. Removal of the endocervical mucosa, glands, and Nabothian cysts in toto must be done in order to correct this condition. This is best done by cervical conization.

Although conization can be done in the office, it is advisable only as a hospital procedure on an anaesthetized patient, both for her comfort, assurance of complete removal, and control of bleeding in the occasional case in which it may be profuse. Conization is contraindicated in the face of acute or recurrent subacute cervicitis, vaginitis or pelvic inflammatory disease until these conditions are well controlled. Due to the amount of necrotic tissue produced by

conization and the exposed location, any pre-existing infection readily spreads to involve the operative site. It should not be done during pregnancy or lactation. Optimally the patient should be several months postpartum as the cervix is likely to be more vascular resulting in troublesome bleeding in the early months. The date of operation should be as soon after menstruation as possible to allow the longest interval before the next menstruation.

Following the conization, the cervical canal should be palpated for Nabothian cysts outside the coned area and these destroyed by electro-coagulation. Bleeding points are also coagulated and the margin of the coned area externally rounded over by coagulation so that a smooth, rounded external os will eventually be formed. Preferably an iodoform cervical and vaseline vaginal packing are inserted. This not only aids in the prevention of bleeding but tends to prevent the early formation of adhesions across the canal. Both are removed the third postoperative day in the office. After the third day, a daily vinegar douche followed by a buffered acid or sulfa vaginal jelly should be used until healing is complete. The slough comes off between the seventh and fourteenth days during which period minor bleeding or spotting is usual and secondary hemorrhage can occur. Therefore the patient should be relatively inactive or in bed during this time. Visible healing is present by the sixth week, the external cervix and canal then being covered throughout by squamous epithelium. Tissue changes, however, continue for approximately six months. Throughout this interval, sounds or the smallest sized dilators must be regularly passed up the canal at two-monthly visits to prevent the possible formation of adhesive bands or a more generalized stenosis of the canal. If this routine is regularly followed even in cases which do not apparently require it, no untoward difficulties will develop and the end-result will be a cervix very nearly nulliparous in appearance.

It may be well to review some of the arguments once brought against cervical conization, since they were both widespread and vehement. It was thought that the removal of the cervical glands and the loss of their secretions would produce a dry vagina leading to dyspareunia. That this does not occur has been proven repeatedly, and even when the cervix has been entirely removed by total hysterectomy it is rare. It was also believed that the loss of the cervical secretions and endocervical mucosa would produce sterility. On the contrary, it has been found that chronic cervicitis often can be the cause of sterility and following conization fertility is restored. I have seen this repeatedly demonstrated in my own cases. Some prefer cervical amputation or radial streaking cauterization to conization. If cervical amputation is a part of other operative procedures being done there can be no argument against it, but if done alone rather



than conization, the relative length of hospitalization is a disadvantage. Patients may be sent home the following day after conization. Cauterizations by radial streaking as the other alternative, should probably be considered an outmoded procedure. Cosmetically it does improve the appearance of the cervix but little else can be said for it. Its principle use was in the treatment of eversion and lacerations which were improved in appearance by the infolding and contracting of the cervical tissue by fibrosis around the radial scars produced. However, the infection deep in the endocervical glands remained untouched except along the streaks actually cauterized; furthermore the contracting scars and fibrosis caused blockage of more endocervical glands and therefore the production of more Nabothian cysts. Conization is both more physiologic and efficient in removing the source of infection as well as the lacerations. And finally it may be said for conization that

it removes the dangerous muco-squamous junction so often the point of origin of cervical carcinoma, allowing histologic study of this area in every patient. For these reasons, although radial streaking is still an accepted textbook procedure, conization is preferable.

In conclusion it should be emphasized that cervicitis is a significant, frequent condition of importance in the production of many pelvic signs and symptoms including sterility, as well as a predisposing factor in the later development of cancer. Attention to cervicitis in any of its forms is still our most successful prophylaxis against the second most common type of female cancer. Such care is mandatory, more particularly since available means are at hand to produce uniformly good results if the method of therapy is individualized and balanced with the degree of involvement.

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*Coordination - Cooperation vs. Polio—Continued from page 351*

doctor was given instructions to return to his local doctor and if he seemed to think that further treatment was necessary he was to refer the patient to the Out-Patient Department at the Eastern Maine General Hospital. With the above dispositions made it was felt that no patient was being neglected and that all patients as far as possible were being closely followed and would be checked in order to prevent deformities, and to make further indication for surgery or rehabilitation when the occasion arose.

The Service was an interesting one. It offered an opportunity to aid the public in a time of stress. It also offered the opportunity to reassure these patients that from a financial and medical standpoint that they were well taken care of. One can only feel grateful for the excellent coöperation from all agen-

cies and people concerned with the treatment of acute and chronic Poliomyelitis.

It is my own personal opinion that the Polio Service has been carried out honestly for the best of the individual patient, both in guidance of their medical difficulties, financial difficulties, and rehabilitation for the future. The publicity has been good and I feel that the public relationship is good both for the people, the Eastern Maine General Hospital, and the medical profession as a whole.

I have no recommendations to make other than have already been stated. The success of the treatment of these patients has been because of the excellent coöperation of the hospital, its personnel, the residents, the interns, the nursing service, the physiotherapists, and the Penobscot County Chapter for the National Foundation for Infantile Paralysis.

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Chronic senile phthisis is a condition which may drag on for years unsuspected, and the patient may come to be regarded as just another chronic bronchitic. The patients and their relatives are often so accustomed to their symptoms, and have had so little help from medicine, that they are averse to again visiting their doctor for a detailed overhaul, and the true state of affairs is only brought to light when some young member of the family develops acute tuberculosis, possibly meningitis, and all contacts are reviewed. Then the damage is done; for the sputum of the supposed chronic bronchitic is found to be loaded with tubercle bacilli. — W. A. Lister, M. D., *The Lancet*, April 30, 1949.

The responsibility of the doctor in enabling the patient to gain psychological acceptance of the diagnosis cannot be too strongly emphasized. There is much that auxiliary medical personnel can do, but all they do cannot equal what the doctor himself can accomplish in helping the patient to develop a constructive attitude toward his illness. The patient "can take it" from the doctor to a degree that no one else can match. The understanding and assurance the patient receives from the doctor have far more effect in creating a frame of mind conducive to successful hospitalization than any help the patient receives from others. — William B. Tollen, Ph. D., *VA Pamphlet* 10-27, Oct., 1948.

## CYSTS AND SINUSES OF THE NECK†

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A patient recently operated upon at the Framingham Union Hospital was found to have both a thyroglossal and a branchial cyst. In view of the well known tendency for embryological defects to be multiple it is surprising that a fairly complete review of the literature has failed to reveal a similar case. This has prompted us to review the experiences with these diseases at the Framingham Union and Massachusetts Memorial Hospitals.

The nomenclature of cysts and sinuses of the neck has been discussed by numerous authors. Because the exact embryological origin of thyroglossal and branchial cysts and sinuses is not known, the simple terms "median" and "lateral" have been used with increasing frequency. These terms, however, do not exclude dermoids or simple retention cysts, which may be found in either position. Frazer<sup>9</sup> has suggested the term "vestigial" to emphasize their embryological origin. While the terms "median vestigial" and "lateral vestigial" are preferable, the terms thyroglossal and branchial are so generally used and understood that there is no reason to believe that they will ever be excluded from the literature of this subject.

### EMBRYOLOGY

#### *Lateral Cysts and Sinuses:*

In the human embryo, the branchial apparatus is a transitory structure first seen in the latter half of the first month. It is composed of 5 or 6 pairs of branchial arches which are separated from each other by branchial grooves on the ectodermal side and by pharyngeal pouches on the entodermal side. The pharyngeal pouches, which are the structures important to this discussion, are numbered successively from 1 to 5, beginning at the cephalic end. The first pouch gives rise to the eustachian tube and tympanic cavity. The second pouch gives rise to the sinus tonsillar and the tonsil, while the third forms the thymus. The fourth pouch develops into the lateral thyroid anlagen and the ultimate disposal of the remaining pharyngeal pouches is not definitely known. A difference of opinion exists as to whether branchial cysts and sinuses arise from the second pharyngeal pouch or from the anlage of the thymus (the third

pharyngeal pouch). In favor of the second pouch is the fact that, when internal openings are present, they are often in the supratonsillar fossa. On the other hand cysts and the external openings of sinuses occur along the anterior border of the sternocleidomastoid muscle from the angle of the jaw to the suprasternal region. Wenglowski<sup>22</sup> has pointed out that the lower cysts and sinuses could hardly arise from the branchial apparatus itself, since this structure is responsible for the embryological development of nothing below the level of the hyoid bone. The anlage of the thymus, however, which arises from the third pharyngeal pouch, closely follows the course along which branchial cysts and sinuses are found. Failure of regression of the cervical portions of the thymus anlage is believed by many to be the origin of these embryological remnants. However, Bailey<sup>1, 3</sup> disagrees with Wenglowski because his theory does not explain the existence of cartilagenous cervicle auricles that appear in the lower part of the neck that are certainly of branchial origin. There seems to be little doubt that lateral cervical cysts and sinuses represent a persistence of one of the branchial structures.

#### *Median Cysts and Sinuses:*

These abnormalities arise from a defect in the development of the thyroid gland, which has three anlagen: two lateral and one median. The median anlage arises from the pharynx at about the level of the first pharyngeal pouch during the fourth week of embryonic life at a point which in the adult is marked by the foramen cecum of the tongue. Wenglowski<sup>22</sup> showed this tract to be a solid downgrowth of cells which never exhibits a lumen. Meyer<sup>16, 17</sup> believes that cysts develop from epithelial rests, displaced from the pharynx by the middle thyroid anlage. He further states that, "one often sees complete lateral fistulas, but complete median fistulas do not exist." Semken<sup>19</sup> and Peterson<sup>18</sup> both state that no complete fistula with outer skin orifice and inner pharyngeal opening has ever been reported. However, several authors have reported cases with complete midline sinuses opening into the foramen cecum. Kinsella<sup>14</sup> reported a case of a thyroglossal cyst with an external opening into which iodized oil was injected. The patient was then X-rayed and a complete tract was demonstrated from the midline external opening to the foramen cecum, with oil entering the esophagus. Johnson<sup>13</sup> reported a case similarly proved by X-ray following injection of lipidol. Baumgartner<sup>4, 5</sup> showed complete patency of a thyro-

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glossal sinus by injecting methylene blue. Gross<sup>11</sup> states that, "in rare cases pressure on the cyst will express a small amount of fluid into the throat by way of a tract leading to the base of the tongue."

## CLINICAL ASPECTS OF LATERAL AND MEDIAN CYSTS AND SINUSES

### *Classification:*

Cervical cysts and sinuses may be classified as follows:

- I. Median (Thyroglossal).
  - A. Median cysts.
  - B. Median sinuses.
    1. Complete (having both internal and external openings.
    2. Incomplete.
      - a. Internal opening only.
      - b. External opening only.
- II. Lateral (Branchial).
  - A. Lateral cysts.
  - B. Lateral sinuses.
    1. Complete.
    2. Incomplete.
      - a. Internal opening only.
      - b. External opening only.

### *Incidence:*

At the Massachusetts Memorial Hospitals there were 34 cases of median or lateral cysts and sinuses out of 106,940 admissions, and at the Framingham Union Hospital 7 cases out of 69,419 from 1927 to 1945. The combined incidence was .023%.

### *Pathology:*

Lateral and median cysts and sinuses give rise to symptoms because they contain the metabolic products of displaced epithelium or because of secondary infection. The epithelium varies from stratified squamous to cuboidal or columnar; often ciliated. In the series of 28 cases of median cysts 14 contained stratified squamous epithelium, 4 cuboidal, 6 ciliated columnar, and 4 cases in which the epithelium had become desquamated. In the 13 cases of lateral cysts, 12 had stratified squamous epithelium and the other case ciliated columnar. The epithelium is surrounded with dense connective tissue which is infiltrated with varying numbers of lymphocytes and lymphoid follicles. Hyndman and Light<sup>12</sup> believe that the presence of packed lymphocytes and lymphoid follicles may be due to the almost universal infection. Median cysts usually show only small numbers of lymphocytes and of the 28 cases of this series, none contained lymphoid follicles. However, a microscopic differential diagnosis between median and lateral cysts cannot be made.

### *Clinical Features of Lateral Cysts and Sinuses:*

Of the patients with lateral cysts, ages varied from 2 years to 58 years with an average of 24.5 years. The average duration of symptoms was 3.5 years. There were 5 females and 8 males.

The usual chief complaint is a painless swelling in the neck which often is 4 cm. in diameter or larger before it is noticed. In this series the cysts varied from 1.0 to 8.0 cm. in diameter with an average of 4.1 cm. In three of the cases the onset was preceded by an upper respiratory infection, but in only 2 cases did the patient complain of pain. In one case there was an increase in the size of the swelling during pregnancy.

Twelve of the cases were cysts, without internal or external openings. One sinus had an external opening from which small drops of milky secretion could be expressed on pressure. Usually the fluctuant nature of the cysts is evident on examination but occasionally the cyst is so tense that it is mistaken for a solid tumor. Nine cysts were on the right and 4 on the left, but in each case the swelling was anterior to or under the anterior border of the sternocleidomastoid muscle. None opened into the pharynx.

### *Diagnosis of Lateral Cervical Cysts and Sinuses:*

A lateral sinus with an external opening must be differentiated from a tuberculous sinus. The history of a cyst of long duration which has either ruptured spontaneously or has been surgically drained usually makes this easy. In addition there is usually a matted consistency to the tuberculous nodes which together with the demonstration of other tuberculous foci, aid in the diagnosis. As Bailey<sup>2</sup> points out it would be unlikely that a tuberculous abscess would exist for several years without becoming attached to the skin. The demonstration of chloesterol crystals microscopically is diagnostic of lateral cysts or sinuses, while the presence of tubercle bacilli is of course diagnostic of a tuberculous infection.

Dermoid cysts rarely occur in the characteristic location of lateral cysts. When they do, preoperative differentiation may not be possible. This, however, is not important as complete excision is the treatment in either case. The presence of hair and other foreign element makes the differentiation after the cysts have been removed.

Cystic hygroma has a rubbery or spongy consistency and is often lobulated. Hygromas are more common in infancy or early childhood and usually transilluminate with light while lateral cysts do not.

Venous hemangiomas are usually deep seated and can be differentiated by observing the "sign of emptying" described by Bailey,<sup>2</sup> i.e. pressure on one portion of the tumor mass causes the fluid content to be translocated into another portion. Lipomas offer little difficulty as aspiration reveals no fluid.

Median cysts and sinuses are found in the midline and move with deglutition.

With deep cervical abscesses there is marked induration, tenderness, and systemic reaction. Actinomycosis is extremely rare and may be differentiated by demonstration of the ray fungus in the discharge.

Hodgkin's disease and primary neoplasms may require biopsy in order to establish the diagnosis. Lahey<sup>15</sup> believes lymphosarcoma can be differentiated by the fact that it consists of a group of fused, adherent nodes. Blood studies will usually rule out leukemia. That the differential diagnosis of branchial cysts and sinuses is not without difficulty, is evidenced by the fact that in Lahey's series, in only 57% was a correct diagnosis made preoperatively.

#### *Treatment of Lateral Cysts and Sinuses:*

The only treatment for branchial cysts and sinuses is the complete surgical removal of all the epithelial lining. If any part is left behind a recurrence is likely. Lateral sinuses with openings into the pharynx have been treated by simple ligation at the pharyngeal wall. The techniques of Von Hacker and Kernig<sup>7</sup> have not been used. Simple incision and drainage is indicated only in the presence of acute infection, when complete removal would be dangerous or impossible. If such a procedure is necessary it should be followed by complete excision after the infection has subsided.

Cutler and Zollinger<sup>8</sup> have reported cures following the injection of Zenker's or Carnoy's solutions. We have had no experience with this form of treatment.

#### *Clinical Features of Median Cysts and Sinuses:*

The clinical features of median cysts and sinuses are similar to those of branchial origin. This study is based on 28 cases; 25 of which were operated on at the Massachusetts Memorial Hospitals and 3 at the Framingham Union Hospital.

The ages of the patients varied from 5 years to 69 years, with an average of 29.8 years. The average duration of symptoms was 6.3 years; the shortest 1 week and the longest 39 years. There were 16 males and 12 females.

The chief complaint of all patients with median cysts and sinuses was a painless swelling or discharging sinus in the midline of the neck. The cysts varied from 1.0 to 4.0 cm. in diameter with an average diameter of 2.7 cm. There were 9 cases with persistent or intermittent drainage. In all of these there was a history of a preceding cyst. Five had ruptured spontaneously and the remaining 4 were surgically drained. Three patients in this series had easily demonstrable patent openings at the foramen cecum.

The first patient, a 64-year-old, white female had a non-tender, cystic swelling 2.5 cm. in diameter slightly to the right of the midline at the level of the hyoid bone. Pressure on this cyst caused the discharge of a yellowish thick exudate which could be seen to come from the foramen cecum.

The second patient, a 26-year-old, white male had a swelling in the midline of the neck which, he stated, had been incised and drained several times before admission. At the time of admission he complained of drainage into his mouth which was seen to come from the foramen cecum, when the cyst was compressed.

The third patient, a 20-year-old white male had a complete sinus tract extending from the external opening, 2.5 cm. below the hyoid bone in the midline of the neck, to the foramen cecum. The patency of this sinus was proved by injecting methylene blue into the external opening and watching it come out of the base of the tongue at the foramen cecum.

#### *Diagnosis of Median Cysts and Sinuses:*

The diagnosis of a median sinus is relatively simple in that there is usually a history of a preceding cyst which has been incised or which has ruptured spontaneously. Often the sinus tract can be felt to extend up to the hyoid bone and to move with deglutition.

Median cysts are easily confused with midline adenomas of the thyroid. They can be distinguished by the consistency or by aspiration of the contents of the cysts. Median cysts are usually not confused with dermoid cysts or wens, since these do not move with deglutition.

#### *Treatment of Median Cysts and Sinuses:*

As in the treatment of lateral cysts and sinuses, the complete removal of all epithelium bearing tissue is essential to cure. The Sistrunk<sup>20, 21</sup> operation has proved satisfactory in this and in a preceding series of cases (E. A. G. 10). In this operation the entire tract up to the foramen cecum is removed. Since the tract has a varying relation with the hyoid bone, the center 2.5 cm. of this bone is removed.

#### *Report of a Case of Median and Lateral Cyst in One Patient:*

In reviewing the literature there was found one case reported by Bolman,<sup>6</sup> in which there were bilateral lateral sinuses; but no cases were found in which both median and lateral cysts were present in one patient. The following is a summary of such a case:



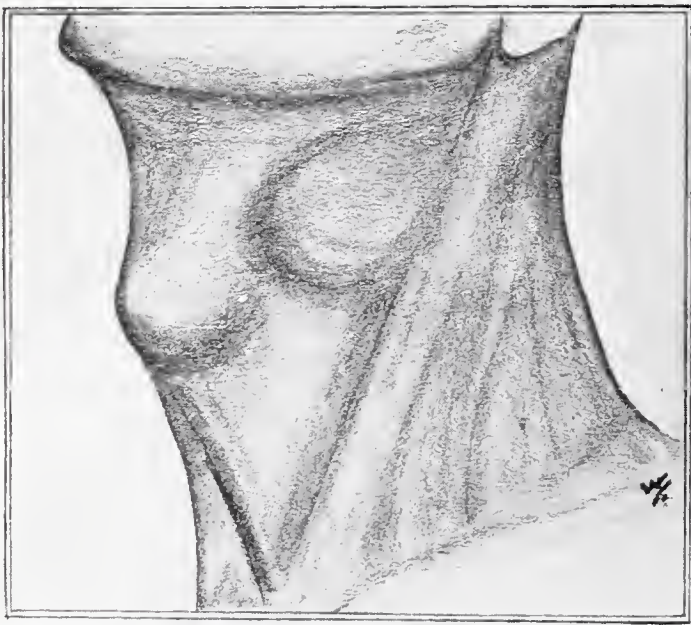


Fig. 1. Preoperative sketch of patient with both median and lateral cysts.

A 58-year-old, white married male was admitted to the Framingham Union Hospital complaining of a painless swelling on the left side of the neck for the past 3 years. He had not noted a midline swelling. Examination revealed a soft, fluctuant tumor 6 cm. in diameter, anterior to the sternomastoid muscle at the level of the hyoid bone. There was also a firm, non-tender, tumor in the midline at the level of the cricoid cartilage, 2.5 cm. in diameter, that moved with deglutition (Fig. 1). A definite cord to the hyoid bone could not be felt. At operation a curvi-

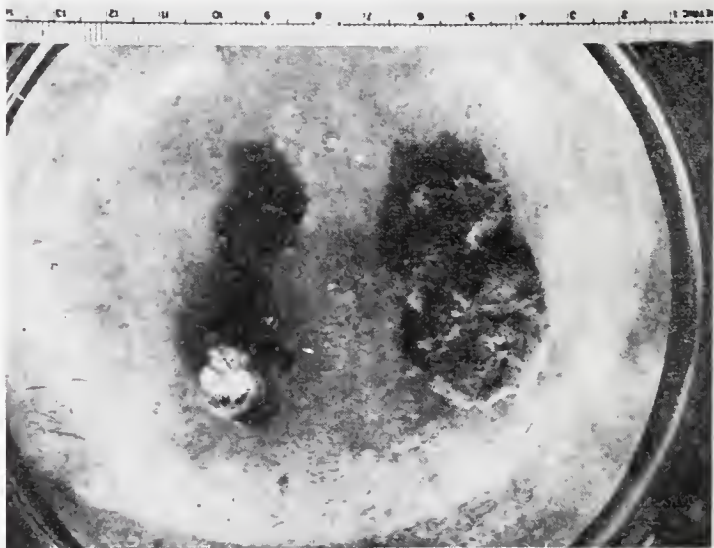


Fig. 3. Photograph of median and lateral cysts.

fluid from both cysts showed fat droplets and epithelial debris, but no cholesterol crystals. Microscopically the wall of the median cyst was found to consist of connective tissue of varying density, infiltrated with fibroblasts and lymphocytes. The lining epithelium was desquamated. The lateral cyst wall was made up of connective tissue infiltrated with lymphocytes, but without lymphoid follicles. The epithelial lining was also desquamated.

SUMMARY

The nomenclature of cysts and sinuses of the neck has been briefly discussed and the simpler terms "median" and "lateral" have been used interchangeably with thyroglossal and branchial.

The embryology of lateral cysts and sinuses was described along with its controversial aspects, and the conclusion drawn that, although their exact origin is still unexplained, they undoubtedly represent a persistence of one of the branchial structures. On the other hand, it seems fairly clear that median cysts and sinuses arise from the median thyroid anlage.

Median and lateral cysts and sinuses were classified and their pathology, as found in the 41 cases reported, discussed.

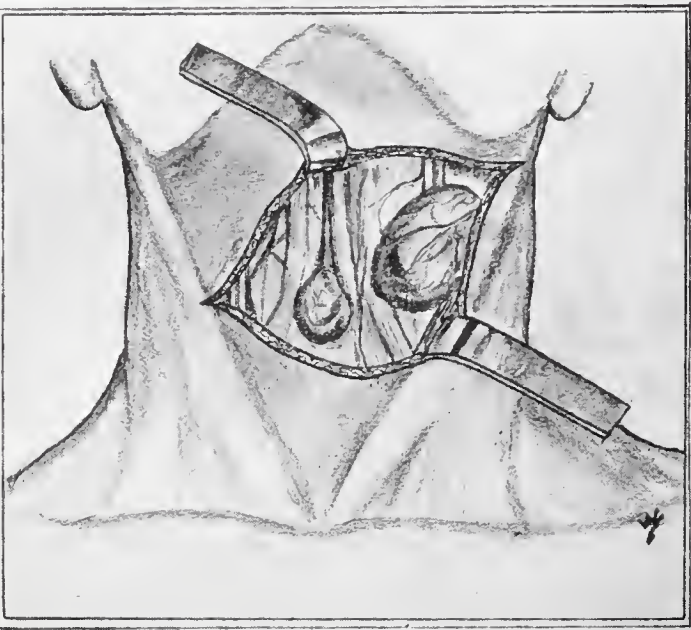


Fig. 2. Drawing made showing appearance at operation.

linear incision was made from the angle of the left mandible extending to the right of the midline at

## CARCINOMA OF THE COLON\*

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As in all cancer, the most important factor leading to satisfactory treatment is early recognition. In order to recognize the condition we must first suspect it. We must be suspicious of everybody and do routine rectal examinations and further checking where indicated.

The symptoms which may cause the patient to seek professional advice are many and varied. They may even seem to be far removed from bowel pathology. Among the symptoms which may be presented as a chief complaint, allow me to present the following:

1. Change in bowel habits; there may be irregularity or alternating periods of diarrhea and constipation.

2. Hemorrhoids; sigmoidoscopy is a good routine associated with hemorrhoidectomy.

3. Mucus or blood in stool.

4. Weakness, secondary anemia, weight loss, fever of undetermined origin. These vague complaints may be all we have to work with previous to complete investigation.

5. Abdominal cramps.

6. Acute abdomen or pelvic abscess due to perforation.

7. Intestinal obstruction may be either acute or chronic with the latter more common and accompanied by borborygmus.

8. I had one case who presented himself with a chief complaint of swelling in his ankles. Investigation proved that his edema was secondary to an extensive carcinoma of the caecum with generalized carcinomatosis. This man was working right along, said he felt well and had a good appetite, finally admitted his right side hadn't felt just right for maybe a year.

The most frequent tumor of the colon is carcinoma; the caecum and sigmoid are most frequently invaded and the rectosigmoid region is the favorite site. Carcinoma of the colon is said to occur more frequently in males with the ratio 2:1. It is more common in the fifth and sixth decades, but may occur at any age.

We have selected a few cases to present here — their ages range from 35 to 80.

### CASE NO. 1

R. N., age 49, was admitted with a chief complaint of abdominal cramps; no gas, nausea, or vomiting. No bleeding, occasional constipation. Had been on reducing diet six months — lost thirty-two pounds. Menopause year ago. Physical examination revealed a large hard fixed mass in the pelvis which was thought to originate from the uterus. Exploration March 22, 1949, revealed carcinoma of sigmoid with attachment to cervix. First stage Lahey (double-barreled colostomy) was done. April 9, 1949, abdomino-perineal resection, panhysterectomy, bilateral salpingo-oophorectomy was done. Discharged sixteenth day. Pathology showed adenocarcinoma of sigmoid extensive to serosa; negative lymph nodes. Patient is now doing well and working.

### CASE NO. 2

L. U., DWF, age 35, presented herself with chief complaint of low abdomen and back pain with constipation of one month duration. No weight loss, no bleeding. Had bilateral salpingo-oophorectomy for acute recurrent salpingitis(gc) — 1947. Routine physical examination was negative except for a palpable tumor on digital examination of the rectum. Proctoscopy and biopsy, April 13, 1949, revealed adenocarcinoma of the rectum. One-stage resection, April 20, 1949. Discharged eighteenth day. Pathology — adenocarcinoma rectum; negative lymph nodes. X-ray study two months post-operative was negative. Now doing well and working.

### CASE NO. 3

W. B., MWM, age 60, has a two-year history of trouble first manifested by rectal bleeding in November, 1947, when a hemorrhoidectomy was performed at a private hospital without benefit of sigmoidoscopic examination. He continued to bleed and in July, 1948, sigmoidoscopy was done and a tumor found. A one-stage combined abdomino-perineal resection was done. He made a good recovery and was discharged eighteenth day. Pathology showed adenocarcinoma of sigmoid, grade II, negative lymph nodes. He remained well until June, 1949, when abdominal cramps of increasing severity began. In September, barium enema was done through the colostomy and a questionable filling defect noted in the descending colon. He was re-admitted and explored. The liver was normal and no mesenteric nodes were palpable; a neoplasm of the descending

\* Presented to the Bangor Medical Club, September 27, 1949.

\*\* Attending surgeon, Eastern Maine General Hospital.



colon was found and resection done. Post-operative recovery was uneventful. Pathology showed adenocarcinoma of colon, grade II.

#### CASE NO. 4

P. R., MWM, age 64, was seen as out-patient complaining of pain in both lower quadrants, rectal bleeding of five weeks' duration. Barium enema — December, 1947, showed a filling defect in sigmoid. Operated January 8, 1948—resection and end-to-end anastomosis. Pathology — adenocarcinoma of sigmoid, grade II, showing distant mucosal implants. Discharged fourteenth day. Now doing well and working, two years after operation.

#### CASE NO. 5

H. T., MWM, age 59, had barium enema as an out-patient because of a two-day episode of diarrhea three weeks prior to admission. Questioning elicited history of vague indigestion with gas for three months. No weight loss, no bleeding. Barium enema, September 25, 1948, was reported as showing filling defect in transverse colon. Operated October 4, 1948 — resection and end-to-end anastomosis; liver studded with metastases. Pathology — adenocarcinoma, grade III. Discharged thirteenth day. Died in three months.

Illustration No. 1



#### CASE NO. 6

J. L., WWM, age 80, one-legged Spanish War Veteran, was admitted with chief complaint of belching and bloating two months. Lost forty-three pounds in six months. Occasional diarrhea. Barium enema, October 3, 1948, was reported as revealing annular carcinoma transverse colon. Operated October 6, 1948 — resection and end-to-end anastomosis. Pathology — adenocarcinoma of transverse colon, grade II. Discharged thirteenth day. Now doing well.

Illustration No. 2



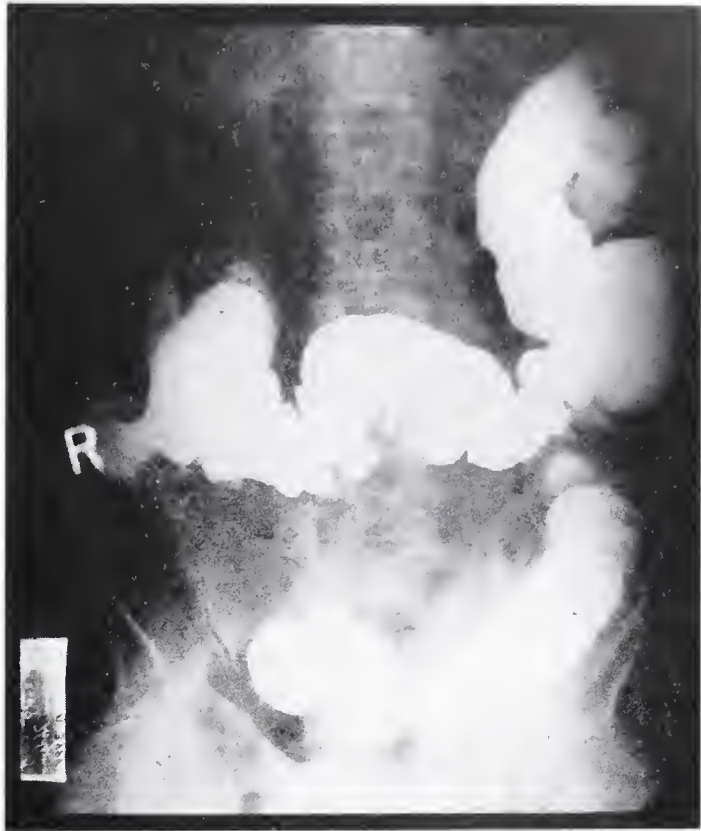
#### CASE NO. 7

O. G., MWM, age 69, was admitted complaining of dull pain and soreness right lower quadrant for two months. Had "stomach trouble" with gas and belching after eating for years. Lost thirty pounds in six months. Constipated by times — no bleeding. Physical examination revealed a palpable mass right abdomen. X-ray, March 25, 1949, reported duodenal ulcer, poorly functioning gall bladder and a large neoplasm involving caecum and ascending colon. Right hemi-colectomy was done. Post-operative course was not eventful. Pathology mucoid adenocarcinoma of caecum, grade II; subacute lymphadenitis. Discharged eleventh day. X-ray check two months was negative. He is now doing well and working on his farm.

Illustration No. 3



Illustration No. 4



CASE NO. 8

L. S. H., MWM, age 61, was admitted with a chief complaint of swelling in both legs and right testicle. Physical examination revealed marked edema of both legs and scrotum and penis; there was a large mass palpated in the right lower quadrant. Barium enema done September 7, 1949, substantiated the diagnosis of carcinoma of the caecum. Blood studies revealed a total protein of 4.9 with albumin 2.5 and globulin 2.4. On September 12, 1949, abdominal exploration revealed carcinoma of the caecum with widespread metastases. Biopsy was taken and an ileo-transverse colostomy was done. He made a good post-operative recovery and left the hospital the tenth day. He died very suddenly October 15, 1949 — five weeks after first seeking medical attention.

Diagnosis of carcinoma of the colon may be made by:

1. Digital examination.
2. Proctoscopy and sigmoidoscopy with biopsy.
3. Papanicolaou stain has been successfully used on colonic washings.
4. Barium enema.
5. Exploratory laparotomy.

Treatment is surgical extirpation. Operability depends on:

1. Metastases. Even if present, removal of the primary growth, where possible, is indicated.
2. Lymphatic involvement.
3. Local attachment of the growth.
4. Physical condition of the patient.

The operative procedure to be chosen depends, of course, on the location of the tumor. With the aid of chemotherapeutic agents, especially sulfathalidine, and the antibiotics, and decompression tubes such as the Miller-Abbott and the Cantor, the tendency is now to select one-stage procedures with primary closed or open anastomosis and without complementary proximal drainage.

Tumors of the caecum and right colon are treated by one-stage right hemi-colectomy with anastomosis of ileum to transverse colon.

Tumors of the transverse, descending colon and sigmoid can quite commonly be resected and end-to-end anastomosis done.

For tumors of the rectum and rectosigmoid, the recognized procedure is a one-stage combined abdomino-perineal resection.

*Continued on page 369*



## MECONIUM ILEUS OF THE NEWBORN

### A Case Report

HAROLD F. RHEINLANDER, M. D.\*

Meconium ileus has been, until the past couple of years, a uniformly fatal disease.<sup>1</sup> According to Landsteiner<sup>2</sup> this disease, which is present at birth, is due to diminished or absent pancreatic secretions which in turn results from fibro-cystic disease of the pancreas. Without pancreatic enzymes the meconium in the intestinal tract becomes inspissated and putty-like, adheres to the bowel wall and causes intestinal obstruction. Volvulus and perforation of the bowel with peritonitis occurs frequently proximal to the point of obstruction.<sup>3</sup>

The first report of a successfully treated case was made by Hiatt and Wilson in 1948.<sup>3</sup> They reported 8 cases with 4 survivals following operative relief of the obstruction by manual removal of the inspissated meconium through an ileotomy. The following patient is presented in detail as an illustration of a typical case of meconium ileus of the newborn.

B. G. P., was born in the Eastern Maine General Hospital on October 9, 1949. This was the first child of a 25-year-old mother, born as a vertex presentation after a full term normal pregnancy and a labor of eight hours' duration. The birth weight was 6 lbs. and the condition was good. During the first two days of life the child was fed regularly every four hours and took 15 to 30 cc. per feeding. On the second day of life she vomited a small amount of greenish vomitus. The baby stained her diaper with small amounts of greenish material on several occasions but on the third day it was noted that the abdomen was quite markedly distended and tympanitic. Surgical and pediatric consultations were obtained.

Physical examination at this time showed an acutely ill infant who was pale and lethargic except for paroxysms of crying associated with drawing up of the legs on the abdomen. Temperature was 102°F. by rectum. The mucous membrane was dry, the skin was inelastic and had lost its turgor. The heart sounds were good and the lungs were clear. The abdomen was greatly distended, very tense and tympanitic. No masses or organs could be palpated. No peristaltic waves or sounds could be distinguished. The anus was patent and no feces could be felt.

Laboratory data revealed a hemoglobin of 18.5 gm., with 6,260,000 erythrocytes, 19,150 white blood cells with 60% granulocytes and 10% bands. Urine was not obtained. Kahn and Hinton were negative.

Several films of the chest and abdomen revealed considerable gas collection in the bowel with one large dilated loop occupying the pelvis and extending to the umbilicus. No gas was seen in the region of the rectum. The heart and lungs were not unusual. On the basis of the films the radiologist suggested a diagnosis of atresia or obstruction of the lower bowel, very likely colon.

A nasal catheter was passed into the stomach and under local anesthesia a polyethylene tube was placed in an ankle vein. The child was anesthetized with open drop ether, continuous O<sub>2</sub> being administered through a nasal catheter, and the abdomen opened through a right rectus muscle splitting incision. The peritoneal cavity contained much bloody fluid. A tremendously dilated black loop of small bowel presented and was delivered along with several more necrotic loops. These loops were then seen to comprise a volvulus which had rotated on its mesentery three complete turns. This was reduced. The necrotic bowel was filled with soft green meconium, but distally, the terminal ileum and entire colon was filled with hard, putty-like meconium. Iliotomy was performed and attempts were made to express the hardened meconium but without success. The gangrenous bowel was exteriorized, a clamp placed across both proximal and distal loops, and the bowel excised. The abdomen was closed in layers with 4-0 black silk about the double-barrel ileostomy. The baby's condition at the end of the procedure was poor. During the operation, 100 cc. of 5% D/saline and 70 cc. of whole blood were given. The specimen of bowel removed at operation was 50.0 cm. long, filled with meconium and was gangrenous throughout.

Post-operatively the baby was maintained in an incubator on gastric suction and nasal oxygen. Electrolyte and nutritional balance was maintained with parenteral 5% D/water, amino acids, and whole blood. Penicillin and dihydro-streptomycin were given in full doses. On the fourth post-operative day the intestinal clamp was removed and the ileostomy allowed to function. The gastric suction was discontinued and pancreatin solution was started by oral gavage. Soon this was replaced by frequent feedings of formula to which was added pancreatin.

Post-operatively enemas of dilute pancreatin solution were administered bi-daily in order to rid the bowel of the inspissated meconium. The enemas were given by the rectal route and at first also through the distal ileostomy opening, but the latter slipped

\* Surgical Resident, New England Center Hospital, New England Medical Center, Boston, Mass., Surgical Resident, Eastern Maine General Hospital, Bangor, Maine.

back into the abdominal wall so that it could not be used for irrigating purposes. However, the bowel emptied and on the 13th post-operative day the baby began to have normal bowel movements, indicating that there was a fistula between the proximal and distal loops of the ileostomy. In spite of this and in spite of a well-functioning ileostomy the patient continued to vomit several times daily.

The electrolyte balance was maintained by oral and intravenous feedings and regulated by the blood chloride and carbon dioxide combining power determinations. Determinations of stool trypsin activity was positive in dilutions of 1:10 indicating very little pancreatic function. Just prior to death the blood chloride was 98 meq/l, the CO<sub>2</sub> combining power 25 meq/l, the total proteins fell to 4.16 gm. with 2.7 gm. albumen and 1.4 gm. globulin. The baby continued to lose weight, grew progressively weaker, and expired on the 25th post-operative day.

At autopsy, extreme emaciation was noted. The lungs were normal. The peritoneal cavity contained no fluid, but there were numerous moderately dense fibrinous adhesions binding together loops of both small and large bowel. One hundred and seventeen cm. of small bowel remained. There was a small perforation of the ileum 17 cm. above the proximal loop of the ileostomy. The cecum was 8 cm. below the lower ileostomy opening. There were a 1.5 cm. fistula between proximal and distal ileostomy loops. No evidence of obstruction was present. The bowel was filled with normal appearing fecal material and no inspissated meconium was present. The pancreas was normal to gross examination. Histologically, pertinent findings were confined to the lungs and the pancreas. Many bronchi were filled with fluid containing polymorphonuclear leukocytes, phagocytic cells and clumps of bacteria indicating some degree of aspiration. There was a well-defined interstitial pneumonitis but no evidence of a true broncho-pneumonia existed. There was a striking increase in the fibrous network surrounding the pancreatic acini. The pancreatic ducts were irregularly dilated, many resembling cystic spaces. Many of these spaces contained fluid and inspissated secretions and scattered

throughout were many polymorphonuclear leukocytes. The islands of Langerhans appeared to be unchanged.

The pathological picture is typical of fibrocystic disease of the pancreas which is most often thought of as being the cause of celiac syndrome, but which, in rare instances causes meconium ileus of the newborn.

The pre-operative diagnosis of this disease cannot be made in the majority of cases. However, since the picture is so similar to that seen in atresia or stenosis of the lower bowel, surgical exploration is clearly indicated. The importance of early surgical intervention after adequate preliminary preparation cannot be too strongly emphasized since these babies will invariably die unless the intestinal obstruction is relieved as early as possible.

In retrospect, this patient who survived the surgical procedure, died because we were unable to provide sufficient protein intake to maintain the metabolic processes in the face of resection of one-third of the small bowel and a partially diverting ileostomy. In such cases, when an ileostomy is unavoidable, extremely vigorous attempts at replacement therapy must be carried out with continuous intravenous infusions of whole blood, plasma, protein hydrolysates, dextrose and electrolytes. This therapy must be continued until bowel continuity is re-established and the oral intake is sufficient to maintain electrolyte balance and positive nitrogen balance.

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I would like to express my appreciation to Dr. A. C. Todd and Dr. A. W. Fellows for their permission to present this case report.

Carcinoma of the Colon—Continued from page 367

SUMMARY

A plea for early recognition of carcinoma of the colon is made. We must first suspect and then investigate adequately. The futility of certain cases is shown and the possibility of complete eradication in favorable cases is presented.

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Cysts and Sinuses of the Neck—Continued from page 364

The clinical aspects and differential diagnosis were taken up and the difficulty of making an accurate pre-operative diagnosis was emphasized.

The treatment of both median and lateral cervical cysts and sinuses is the same; that of complete surgical removal of all epithelium bearing tissue.

Three brief case histories were presented in which complete median sinuses were present, thus proving that complete median sinuses do exist.

Finally an unusual case was presented in which both median and lateral cysts were demonstrated in one patient.

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HOSPITAL STAFF MEETINGS

Open to the Profession

CITY	HOSPITAL	DATE
Augusta	Augusta General Hospital	1st Wednesday
Bangor	Eastern Maine General	2nd Tuesday
Bath	Bath Memorial Hospital	1st Tuesday
Belfast	Waldo County	2nd Friday
Biddeford	Webber Hospital	2nd Thursday
Boothbay Harbor	St. Andrew's Hospital	4th Tuesday
Caribou	Cary Memorial	1st Wednesday
Damariscotta	Miles Memorial	2nd Thursday
Farmington	Franklin County Memorial	2nd Monday
Greenville	Charles Dean Hospital	2nd Wednesday
Hartland	Scott Webb Memorial Hospital	1st Wednesday
Lewiston	Central Maine General St. Mary's General	1st Monday 2nd Monday
Portland	Maine Eye and Ear Infirmary Maine General Mercy	1st Tuesday 2nd Friday 3rd Thursday
Presque Isle	Presque Isle General	1st and 3rd Tuesdays
Rockland	Knox County General	1st Monday
Rumford	Rumford Community	4th Wednesday
Sanford	Goodall Memorial	2nd Monday
Waterville	Sisters Thayer	2nd Tuesday Every Thursday

The above list was compiled from a questionnaire sent out by the Maine Hospital Association. Additions or corrections will be made on notification to the Secretary, Maine Hospital Association, Thayer Hospital, Waterville.

## EDITORIAL

### Things You Should Know

As the year draws to a close I want to bring to the attention of the members of the Maine Medical Association a few things which I feel sure you will want to know about, and will find of interest.

First is the telegram received December 9 from Dr. George F. Lull, Secretary and General Manager of the American Medical Association, relative to the dues for 1950, which follows: "House of Delegates of American Medical Association at meeting December 6 to 8, 1949, adopted \$25.00 dues for active members of American Medical Association for year 1950. Said dues will be collected by State or County Societies in accordance with local custom for collecting your own dues and will be transmitted to Secretary of American Medical Association. Details will follow by mail at early date. Please notify any officials of your Society you think necessary." As soon as particulars relative to collecting these dues are received from the American Medical Association, the Secretaries of our county societies will be notified. I feel sure that the response to this will equal that shown the 1949 assessment.

On October 25, 1949, your Secretary received a letter from the Collector of Internal Revenue at Augusta, Maine, relative to our liability for Social Security Tax, which follows in part: "Records reveal that your organization has been granted exemption from income tax under Section 101-7 of the Internal Revenue Code. The term 'Employment' as defined by the Federal Insurance Contributions (Social Security) Act exempts: 'Service performed in any calendar quarter in the employ of any organization exempt from income tax under Section 101, if the remuneration for such service does not exceed \$45.00.' In other words even though you have been determined exempt from income tax under Section 101 of the Internal Revenue Code, if during any calendar quarter, wages in excess of \$45.00 are paid to any given employee, such wages are to be considered as taxable wages for purpose of the Federal Insurance Contributions (Social Security) Act. Records of this office further reveal that for a considerable period of time you have been filing returns under the Withholding Tax Act, but have not been filing returns under the Federal Insurance Contributions (Social Security) Act. You are requested to advise this office as to whether or not wages have been paid by you in the past to any employees in excess of \$45.00 per quarter." This letter was referred to

Herbert E. Locke, Esq., our Attorney in Augusta. He took the matter up with the Collector of Internal Revenue, and on November 10th notified your Executive Secretary, Mr. Payson, that "the liability is inescapable; there is no statute of limitations; we owe tax from January 1, 1937, to date with interest; we are subject to penalty; but we would hope to avoid the full 25 per cent of tax as penalty and hold it down to an amount equivalent to the interest, the lowest compromise which is ever agreed to by the Collector." It was also requested that this matter be taken care of before December 1st. The Officers and Councilors of the Association were notified of this action and authorized payment of the Social Security tax, plus interest and penalty. In accordance with the above payment has been made as follows: Social Security tax (from January 1, 1937, to October 1, 1949), \$1,359.74; interest at 6%, \$393.05; penalty, \$325.68; making a total of \$2,078.47.

The final installment of the Proceedings of the meetings of the House of Delegates, held at Poland Spring during the annual session in June, is printed elsewhere in this issue of the JOURNAL. The first installment was published in September. I believe that this should be a "must" on your reading list, because the program for your Association's fiscal year stems out of these meetings. The proceedings of the meeting of the House of Delegates held during the Fall Clinical Session, will be published early in 1950.

The Woman's Auxiliary to the Maine Medical Association was organized in June, during the annual session at Poland Spring, with a charter membership of forty-four. Mrs. Charles W. Steele, of Lewiston, was elected its first President.

In closing, I want to commend the following hospitals for submitting material for the Hospital Numbers of the JOURNAL, which were inaugurated in August, 1948, under the direction of the Editorial Board; Thayer Hospital, Waterville; St. Mary's Hospital, Lewiston; Togus Veterans Administration Hospital, Togus; Maine General Hospital, Portland; Central Maine General Hospital, Lewiston; and the Eastern Maine General Hospital, Bangor. I also want to commend the members of the Washington County Medical Society for material for the first county issue. The Editorial Board, under the Chairmanship of Dr. Eugene E. O'Donnell, is continuing its program to improve the quality of the JOURNAL. You will hear more from them in the future.



## COUNTY SOCIETIES

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Secretary, Irving I. Goodof, M. D., Lewiston

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## COUNTY SOCIETY NOTES

### Hancock

The regular meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, Maine, on November 9, 1949. There were eleven members present. Dr. James H. Crowe asked for comment on the JOURNAL OF THE MAINE MEDICAL ASSOCIATION, and discussion on this subject followed. Dr. Crowe reported on the meeting of the House of Delegates held in Waterville during the Fall Clinical Session, and Dr. Raymond E. Weymouth reported on the Council meeting.

Dr. Lyman C. Burgess of Blue Hill spoke briefly on the "Management of Head Injury." Dr. Crowe presented a case of an Rh negative pregnancy, and Dr. Charles H. Knickerbocker spoke on some theoretical aspects of the Rh factor.

CHARLES H. KNICKERBOCKER, M. D.,  
*Secretary.*

### Kennebec

The regular meeting of the Kennebec County Medical Association held at Togus, Maine, November 17, 1949, began with dinner at 6 P. M. In the necessary absence of the Secretary, Dr. James N. Shippee carried on.

The business session was opened by President Harold E. Small, M. D. The Secretary, having arrived, read the records of the previous meeting, which were approved. The President appointed the following nominating committee: Howard F. Hill, M. D., Chairman; Frank B. Bull, M. D.; Leon D. Herring, M. D.; John A. Nelson, M. D.

Dr. Francis D. Moore of Harvard and the Peter Bent Brigham Hospital, guest speaker of the evening, was introduced by Dr. Allen. His subject was "Nutritional Aspects of Gastro-Intestinal Surgery." His talk, illustrated by charts, was intensely interesting. He stated that recovery from injury or surgery is correlated with salt and fluid losses. He discussed total volume, rate and balance, endocrinology of injury and convalescence, and the different mechanisms of N and K balance.

There were over fifty present.

A. H. MORRELL, M. D.,  
*Secretary.*

### Lincoln - Sagadahoc

A regular meeting of the Lincoln-Sagadahoc Medical Society was held at the Hotel Sedgewick, Bath, Maine, December 1, 1949, at 6:30 P. M. There were seventeen members present. Dr. Ralph A. Goodwin, President of the Maine Medical Association, and Mr. W. Mayo Payson, Executive Secretary, were guests. A fine talk was given by both on Compulsory Health Insurance, and the new schedule set up for physicians in the State was outlined by Mr. Payson.

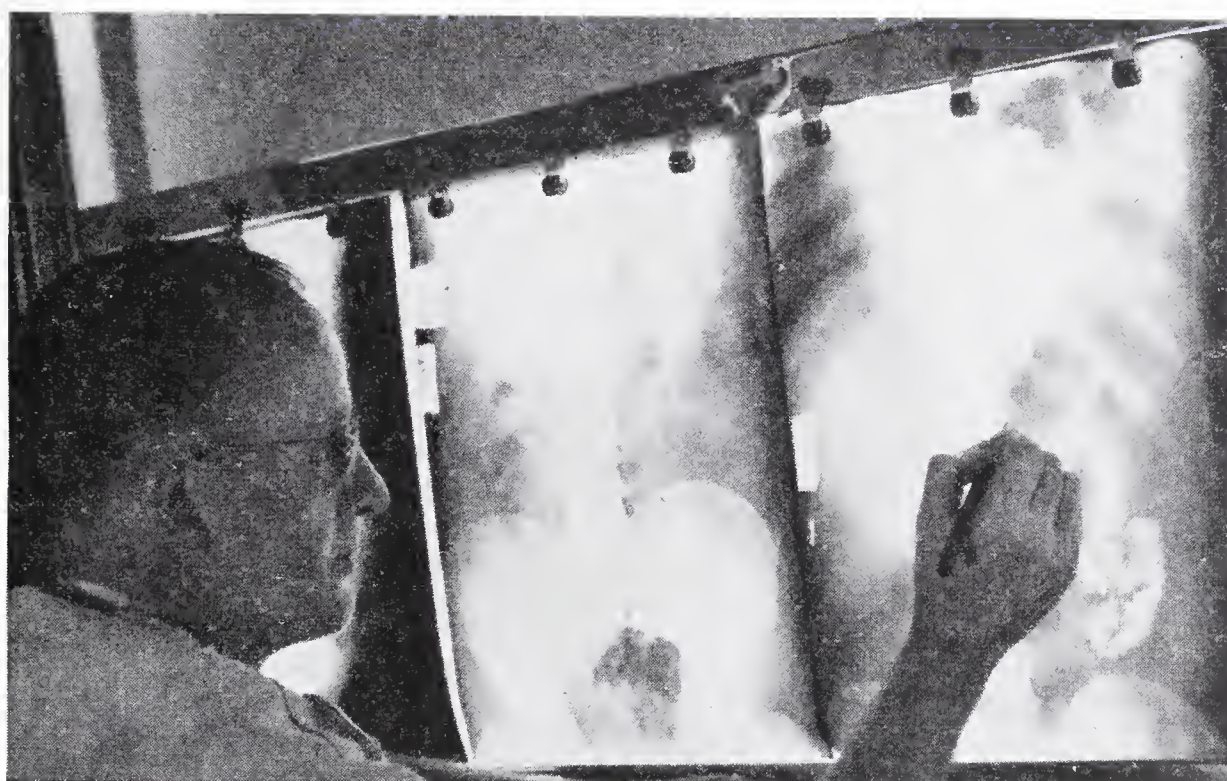
Colored movies of fishing in Maine were shown, after which the meeting was adjourned.

NEIL L. PARSONS, M. D.,  
*Secretary.*

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RESEARCH IN THE SERVICE OF MEDICINE



## Washington

A regular meeting of the Washington County Medical Society was held at the St. Croix Hotel, Calais, Maine, on November 10, 1949, with thirteen members and one guest present. After an excellent steak dinner, a short business meeting was held. Dr. Norman E. Cobb, delegate to the Maine Medical Association, spoke on the recent clinical session in Waterville, and also about the recent meeting in Bangor relative to getting lay speakers to talk on Socialized Medicine.

It was voted that the Society go on record as favoring the formation of a Maine Pediatric Society.

The following members were appointed as an advisory committee to the Woman's Auxiliary: Charles W. Capron, M. D., of Eastport; Hazen Mitchell, M. D., of Calais; and Karl V. Larson, M. D., of East Machias.

Dr. Clarence Emery, Jr., of Bangor, Obstetrician to the Eastern Maine General Hospital, guest speaker, was introduced by Dr. Samuel Webber, President of the Washington County Medical Society. Dr. Emery's subject was "Prenatal Care." He covered the subject very thoroughly and said that it was of ever increasing importance. He stated that it was no longer necessary to regard a pregnant woman as sick and that there was no reason why a pregnant woman could not continue her normal activities up to a short period before confinement. He cited cases of nurses who had continued on duty though pregnant up to the time that labor started. He spoke about a case of a circus bare back rider that continued at her occupation until she was 7½ months pregnant. He mentioned the importance of an adequate history and physical examination, particularly on primiparas and that a few minutes of explanation of what they might expect could save them a lot

of future trouble. Dr. Emery said that women nowadays expect, and should get, good treatment and hospitalization for delivery, if possible.

It was voted to hold the next meeting in St. Stephen, N. B., sometime in January, in conjunction with the St. Croix Medical Society with the following committee in charge: H. S. Everett, M. D., St. Stephen, N. B., Chairman; E. B. Johnston, M. D., St. Stephen, N. B.; and L. W. Brownrigg, M. D., St. Stephen, N. B.

KARL V. LARSON, M. D.,  
*Secretary.*

## York

The November meeting of the York County Medical Society was held at the Henrietta D. Goodall Hospital, Sanford, Maine, Wednesday, November 9, 1949.

Harry Blotner, M. D., and Jacob Fine, M. D., both of Boston, presented interesting talks on Medical and Surgical Diabetes. An active discussion followed.

At the business meeting it was voted to write Senator Brewster to ask him how he stood on Socialized Medicine.

Dr. Eugene H. Drake, Councilor for the First District, reported on the Council meeting held during the Fall Clinical Session at Waterville, and Dr. Carl E. Richards reported on the meeting of the House of Delegates.

Drs. Chrysaphes J. Xaphes, Robert S. LaFond and Paul S. Hill were appointed a nominating committee to bring in a slate of officers for the January meeting.

C. W. KINGHORN, M. D.,  
*Secretary.*

## NEWS AND NOTES

### Courses in Anesthesiology for General Practitioners

The Maine Society of Anesthesiologists, in coöperation with the American Society of Anesthesiologists, is offering refresher courses for general practitioners. Membership in the society is not essential.

Efforts will be made to make the program flexible so that the practicing physicians may secure the training necessary to fit their individual needs. The duration of instruction will be arranged according to individual circumstances—e.g., one-day sessions at weekly intervals, or continuous courses of a week's duration or longer.

Instruction in all or any of the phases of Anesthesiology will be available, including Transfusion and Oxygen Therapy. Courses will consist of lecture, demonstrations and, when possible, anesthetic management of patients under supervision. Fees will be restricted to an initial registration fee of five dollars.

Three training centers in the state have been designated as follows:

Bangor — Instructor — Dr. Clement Dwyer, Director of Anesthesia, Eastern Maine General Hospital.

Lewiston — Instructors — Dr. Gilbert Clapperton, Director of Anesthesia, Central Maine General Hospital. Dr. Dominique Martel, Director of Anesthesia, St. Mary's General Hospital. Dr. Leslie Parent, Associate Director of Anesthesia, St. Mary's General Hospital.

Portland — Instructors — Dr. John R. Lincoln, Director of Anesthesia, Maine General Hospital. Dr. Robert W. Agan, Assistant, Department of Anesthesia, Maine General Hospital.

Physicians interested in such a program are urged to contact the center nearest to them for further information. Scholarships are available for Maine physicians through the Bingham Fund for those interested in pursuing such courses for one week or longer.

GILBERT CLAPPERTON, M. D., *President*,  
Maine Society of Anesthesiologists.  
JOHN R. LINCOLN, M. D., *Secretary*,  
Maine Society of Anesthesiologists.

### Tumor Clinics

Sisters Hospital, Waterville, Maine, 1st and 3rd Thursdays, 10.00-11.00 A. M., Richard L. Chasse, M. D., Director.

Augusta General Hospital, Augusta, Maine, 1st Monday, 9.00 A. M., Leon D. Herring, M. D., Director.

Bath Memorial Hospital, Bath, Maine, 2nd Tuesday, 3.00-5.00 P. M., Francis A. Winchenbach, M. D., Director.

Maine General Hospital, Portland, Maine, Thursdays, 10.00 A. M., Joseph E. Porter, M. D., Director.

Presque Isle General Hospital, Presque Isle, Maine, Thursdays, 10.00-12.00 A. M., Storer W. Boone, M. D., Director.

Madigan Memorial Hospital, Houlton, Maine, 2nd and 4th Wednesdays, 10.00-12.00 A. M., Joseph A. Donovan, M. D., Director.

Central Maine General Hospital, Lewiston, Maine, Tuesdays, 10.00 A. M., Waldo A. Clapp, M. D., Director.

St. Mary's General Hospital, Lewiston, Maine, Wednesdays, 3.30 P. M., Romeo A. Beliveau, M. D., Director.

Eastern Maine General Hospital, Bangor, Maine, Thursdays, 10.30 A. M., Magnus F. Ridlon, M. D., Director.

Thayer Hospital, Waterville, Maine, 2nd and 4th Thursdays, 10.00-11.00 A. M., Arthur H. McQuillan, M. D., Director.

### Venereal Disease Clinics

The Department of Health and Welfare, Bureau of Health, maintains facilities for the diagnosis and treatment of venereal diseases in the following locations:

Augusta, Bangor, Bath, Belfast, Biddeford, Lewiston, Portland, Rockland, Rumford, Sanford, Waterville, Wilton and Winthrop.

Any physician wishing to refer an indigent person for diagnosis or treatment may obtain the name of the nearest clinic physician by contacting the Department of Health and Welfare, Bureau of Health, State House, Augusta, Maine. If no clinic facilities are available, physicians will be authorized to treat indigent patients in their offices. Authorization should be requested before treatment is started.



## WHAT YOU SHOULD KNOW ABOUT TB RESEARCH

In universities and laboratories throughout the country, America's scientists are conducting an unceasing war against tuberculosis. This year alone, more than 22 separate yet coordinated studies are being aided by the National Tuberculosis Association and its affiliates—*made possible by your purchase of Christmas Seals.*

Under investigation are such questions as the chemistry and virulence of the tuberculosis germ, factors influencing the course of early tuberculosis, the reason some strains of germs become resistant to streptomycin, and the effectiveness of a combination of drugs in tuberculosis treatment.

Since 1904, the overall TB program has helped cut the death rate by *eighty-five per cent*—yet TB still kills more people between 15 and 34 than any other disease.

So, please, buy and use Christmas Seals—send in your contribution, today.

## BUY CHRISTMAS SEALS



Because of the importance of the above message, this space has been contributed by



## NECROLOGIES

### Leon George Hagopian, M. D. 1882 - 1949

Leon George Hagopian, M. D., was born in Van, Armenia. As a small child he was left an orphan following a general massacre in which his parents were killed. Friends assisted him to enroll in the American Mission School in Armenia. Subsequently, he emigrated from his homeland to the United States through the aid of a Boston philanthropist, Alice Stone Blackwell, who financed his training at Tufts Medical School. He received his M. D. degree in 1911 and he obtained American citizenship in 1919.

Dr. Hagopian became Town Physician at Petersham, Massachusetts, where he practiced until 1937. At that time, he entered government service in the C. C. C. where he remained throughout its existence until 1941.

In 1942, he opened his office in Southwest Harbor, Maine, where he conducted a general practice until his death. In the course of his practice, he made innumerable sick calls to outlying islands, regardless of weather conditions. In addition to his practice, he served for seven years as Town Health

Officer and as Medical Officer of the Southwest Harbor Coast Guard Station.

Dr. Hagopian was a member of Tremont Lodge, No. 77, A. F. & A. M., Pemetic Lodge, No. 135, I. O. O. F., Rowena Rebekah Lodge, No. 91, Jephthah Chapter, O. E. S., all of Southwest Harbor, and also of the National Grange. He belonged to the Hancock County Medical Society, the Maine Medical Association, and the American Medical Association.

He is survived by his widow, Vesta Hammond (Hinckley) Hagopian of Manset, Maine.

Dr. Hagopian enjoyed good health until eighteen months before his death when he was stricken with carcinoma of the lung. His condition became progressively worse but he carried on his practice until July 1, 1949, when he was forced to give it up.

A conscientious doctor of the "old school" has passed to a well-deserved rest on October 11, 1949.

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### Ara B. Libby, M. D. 1870 - 1949

Ara B. Libby, M. D., retired Gardiner physician, who was active in founding the Gardiner General Hospital, died November 19, 1949, at his home in South Gardiner following a long illness.

He was born at Litchfield, Maine, on January 11, 1870, the son of Nathaniel and Nancy Lydstone Libby.

Dr. Libby was graduated from Bates College in 1893 and from the Maine Medical School in 1899. He was a member

of the Kennebec County Medical Society, the Maine Medical Association, and the American Medical Association for many years. He was a veteran of the first World War.

Dr. Libby was prominent in Gardiner civic life. He was a member of the Masonic Order, and a former president of the Gardiner Rotary Club.

He is survived by his widow, Mrs. Lucy H. Libby, two brothers and one sister.

# Proceedings

## NINETY - FIFTH ANNUAL SESSION

### Maine Medical Association

POLAND SPRING, MAINE

June 19, 20, 21, 1949

(Continued from the November issue of the JOURNAL, page XX.)

CHAIRMAN GOODWIN:

At this time, I think that we should feel honored in having a guest with us from the American Medical Association of Chicago. We have with us today a man who is the Executive Secretary, I think of the Public Relations Department of the American Medical Association, and I should like to have Mr. Lawrence Rember come up here for a few minutes and say a few words to us. The reason I am going to introduce him at this time is because his main object is to come in closer personal contact with each one of you in regard to any questions you may have about the national campaign. Mr. Rember!

MR. LAWRENCE REMBER: Mr. Chairman and members of the House of Delegates of the Maine Medical Association, I bring you the greetings of the American Medical Association and of the officers; Dr. Ernest Irons, as you know, is the new President; Dr. George F. Lull is the gentleman to whom I report frequently. I understand that he spoke at the Vermont and the New Hampshire meetings a few days ago.

I happen to be here because I met Dr. Vickers at the National Physicians' Committee meeting last October, and I told him that I had never had the pleasure and the privilege of being in New England beyond Boston. So he thought that to complete my education I should come up to Maine. I told him that if I were invited, I certainly would be very happy to do so. He has a way with him of getting things done that he wants to do apparently. I got the invitation, and my wife and I started out from Boston, with a U-Dryv-It car, and we have toured New England, and we are certainly delighted with what we have seen both of the countryside and with the people we have met. I felt very close to Maine, for another reason, and that is, your incoming president, Dr. Goodwin, stopped in at the American Medical Association offices about three months ago, with his son, and because of his position, he was very much interested in this national educational campaign, and we had quite a discussion about it.

I know, from hearing Dr. Ames talk to the Women's Auxiliary of your society, which is just now being formed, that you people here in Maine are organizing this campaign in the same type of effort that we put out to win the second world war and also the first world war, and it can truthfully be said, and I shall go back and say it, that we are organized from Portland, Maine, to Portland, Oregon, in this campaign.

One of the satisfying things that I learned from Dr. Vickers was the fact that in each county society, a Campaign Chairman will be appointed, or is being appointed, and this story will be carried down to the grass roots, because that is the way it will be won.

Seven years ago, I decided that a public relations man ought to have some political experience. So I went down and volunteered as a precinct Captain. I was so ignorant when I began that I thought I was supposed to get acquainted with the voters. I rang the doorbell of every voter in my precinct. I got acquainted with every voter in my precinct, and when there were certain jobs to be done, they went out and did them for me, and because they did them, our precinct showed up, and then other opportunities came my way, and in that way, I got quite an inside picture of how politics works.

I know that if you doctors will carry the story to your patients who love you and admire you and respect you, and if you doctors yourselves fight this fight and don't leave it up to Whitaker and Baxter or up to the American Medical Association, we will all be much better off, because after all, the American Medical Association is you. If you do that, we will win, because our case is right. Our case needs only to be told.

In the advertising business, where I gained my experience, there are two principles: You have to have the right product, and you have to tell the people about it.

And, wherever your product is basically right, and wherever it needs to be refined, I am sure that you will refine it.

There is one thing that I think you will be interested to hear about. There has been some talk about a slush fund, and that the American Medical Association was raising three million dollars to invade Washington with a huge lobby. That is not true. Two-thirds of the money which will come in on this campaign and the financing of it, will be directed towards the implementation of the American Medical Association's 12-point program, and that is a positive program; it is a program that will meet the needs of the American people, health-wise, and solve the problems in giving the people the kind of health that they are seeking.

About one-third of the campaign will be devoted to showing the people why compulsory health would be bad for them, and the quality of medical care they would get might be different, and in also revealing to them that this is not free medical care, because they will pay for it through general taxes and payroll tax deductions, and that what they will get will be expensive to them and the quality will be less than what they are getting now.

I have been pretty far away from the newspapers, since I have been vacationing up here, but I read the other day where the AFL had passed an assessment upon their members, and they are starting fifteen months in advance, instead of two and a half months, on their Political Action Campaign, to get the kind of representatives and the senators in Congress they want to put over the compulsory health insurance bills. I also read where the CIO at the same time had become increasingly active.

So that you have a fight on your hands. You have, also, the type of program and you have a principle of democracy and freedom which we know is the finest of any system in the world. We know that we have the best health care in the world. If we will only let the people know that what we have is for their best interests, and if we keep on telling our story, and keep on getting our own house in order, I am sure that they will vote for us and against the President and against Oscar Ewing.

You, as doctors, are outnumbered 760 to 1. Labor was outnumbered 10 to 1. They got the Taft-Hartley Act, when they got too far out of line against the public interest. We must convince the people that our program is best for them, and I feel it a privilege to help you in getting that job done and that story told.

I thank you very much for the privilege of being here.

[Applause]

CHAIRMAN GOODWIN: We appreciate very much your remarks, Mr. Rember. [Applause]



The next order of business on the program today is the election of Councilors for the Fifth and Sixth Districts.

First is the Fifth District; Hancock and Washington Counties. I await nominations for the Councilor from the Fifth District.

DR. JAMES A. CROWE, Ellsworth: Mr. Chairman, I should like to nominate Raymond E. Weymouth of Bar Harbor as Councilor for the Fifth District.

This nomination was duly seconded by several of the members present.

CHAIRMAN GOODWIN: Are there any other nominations? If not, all those who are in favor of the nomination of Raymond E. Weymouth of Bar Harbor as Councilor for the Fifth District will please signify by saying "aye." Those opposed?

*There was a chorus of "ayes" and the motion was carried.*

CHAIRMAN GOODWIN: And I declare Raymond E. Weymouth of Bar Harbor duly elected as Councilor for the Fifth District.

Next, I await your nominations for Councilor from the Sixth District.

DR. RALPH C. STUART, Guilford: Mr. Chairman, I nominate Norman H. Nickerson of Greenville.

DR. P. L. B. EBBETT, Houlton: Mr. Chairman, I have been delegated by the Aroostook County members to present the name of Clyde I. Swett. We believe it is our turn, now. Piscataquis had it from 1940 to 1943, and Penobscot had it from 1943 to 1949, so that we feel it is now Aroostook's turn.

*[Both nominations were seconded.]*

DR. SWETT: Due to the fact that there has been some dissension in the three counties as to whom shall be Councilor for this year, the Delegates have complied with the requests of their societies in reporting the Councilor of their choice, but, since two other counties are in the field, I feel that I should withdraw my name.

CHAIRMAN GOODWIN: All those who are in favor of the motion that Dr. Nickerson be the Councilor from the Sixth District, will please signify by saying "aye." Those opposed?

*There was a chorus of "ayes" and the motion was carried.*

CHAIRMAN GOODWIN: We have elected as our President-Elect the Councilor from the Fourth District. I would at this time, ask the Delegates from Kennebec, Somerset and Waldo Counties, to go into caucus and bring in a nominee for Councilor from that District.

The next order of business comes up under unfinished business. We were to hear a report of the Committee to Study the Revision of the Constitution and By-Laws of the Maine Medical Association by Dr. Stephen Cobb. This presentation is rather important and we should give it due consideration.

DR. STEPHEN A. COBB, Sanford: Mr. President and Members of the Association. Your Committee has had this matter of revision of the Constitution and By-Laws under consideration. A draft of such a revision has been prepared, but it has not been agreed upon in detail by the Committee. A collateral matter has, however, been studied by the Committee, and we are agreed upon this proposition: That the Association should be incorporated under the Sections of the Statutes for the formation of non-profit corporations for scientific and educational purposes. Your present form of organization is that of a voluntary association. In a loose sort of way, it is a partnership, with all of its members being partners in it. The legal obligations and rights of such a group are hazy and ill-defined.

On the other hand, a corporation formed under the statute mentioned, is a definite legal entity, with clear-cut, legal rights and duties. Its legal obligations are those of a corporation, alone, and did not have attached to the members, personally, any obligations. Our counsel, Herbert Locke, Esq., whose opinion was asked on this matter of incorporation, gave it as his opinion that as between a voluntary association, which you now have, and the proposed corporation, the cor-

poration has all of the advantages and none of the disadvantages of the voluntary association.

The tax statutes of the organization would not be affected by this change. Most, if not all, of the State Medical Societies in New England, are incorporated, as are the greater majority of the other State Societies.

There is no purpose on the part of the Committee to propose hasty action. What we recommend to you here today will be on the table for one year, for your considered opinion at the next Annual Session.

And, during that year, a carefully prepared set of by-laws for the organization can be drawn. Copies of such a set of by-laws would be printed in the JOURNAL and also mimeographed and sent to all members at least four months prior to the next annual meeting.

Your Committee recommends, first, that the Constitution of this Association be repealed.

Secondly, that this Association incorporate as a non-profit corporation, under the General Laws of the State of Maine.

The next Annual Meeting of the House of Delegates may accept or reject this program.

An acceptance of the Committee's report does not do anything except to put the two recommendations in order for action next year.

CHAIRMAN GOODWIN: Thank you, Dr. Cobb. You have heard the report of the Committee on Revision of the Constitution and By-Laws. As Dr. Cobb has stated, this means putting this matter before the House of Delegates for one year, so that any action you may wish to take next June at the Annual Meeting can be taken legally at that time.

I await your action on this report.

DR. CHARLES W. KINGHORN, Kittery: Mr. Chairman, I move that the report be accepted.

*[This motion was duly seconded.]*

QUESTION: I should like to ask a question. Can the Constitution be changed or adopted next year, unless this year a copy of the proposed change is given?

DR. COBB: If we decide to incorporate, Doctor, we do not need any Constitution; we then run under By-Laws.

DR. HAROLD J. EVERETT, Portland: Can it be adopted, or rather the Constitution cannot be changed without a year's laying on the table and something else offered in its place. If we have no Constitution or By-Laws now, that means it is going to be two years, doesn't it?

CHAIRMAN GOODWIN: As I understood the discussion in the Committee last night, this report as given is simply to provide a means by which a Committee could study the idea of incorporation, and to put forth new by-laws, which we need, during this interval between the time of this meeting and the next annual meeting. It does not mean that our present Constitution and By-laws are abandoned. But, by announcing this report, we can officially accept, as I understood it last night, a report for incorporation a year from now, having given notice to change. That is the same as if you wish to change the by-laws, you give a notice a year in advance, and then next year you can go ahead and do it.

DR. EVERETT: But, don't the specific points that are to be changed have to be all set a year in advance?

CHAIRMAN GOODWIN: No; I understood that the complete line of incorporation will be mailed to every doctor in the State of Maine at least three months before the Annual Meeting, for study.

DR. COBB: We argued on this for some long time.

MR. PAYSON: You can only amend your Constitution, as you have suggested, Dr. Everett, by presenting the proposed amendment a year in advance. An amendment includes a repeal of the Constitution, if you do that. You will have Articles of Incorporation and a set of by-laws. So, in order to clear the way for decisive action, the Committee has proposed a repeal of the Constitution, which will be the action to be taken a year from now, if the House of Delegates so decides.

CHAIRMAN GOODWIN: Now, the next item under unfin-



ished business is the report of the Committee on Civilian Defense, by Dr. Steele. But before we have his report, we will vote on the last question.

A motion has been made and seconded that we accept the report of the Committee on the Study of the Revision of the Constitution and By-Laws. All those who are in favor of that motion will please signify by saying "aye." Those opposed?

*There was a chorus of "ayes" and the motion was carried.*

CHAIRMAN GOODWIN: I am now going to call upon Dr. Steele for his report on Civilian Defense.

DR. CHARLES W. STEELE, Lewiston: Mr. Chairman and Members of the House of Delegates. I could give you quite a long outline of the things that have happened, but time is getting rather short, and I want to take this opportunity to say to you and to tell you a good many things have happened very recently in the matter of Civilian Defense.

I have here a book entitled "Civilian Defense for National Security" which you can all procure for a dollar, from the Government Printing Office in Washington. It has outlined in great detail all of the various elements that are concerned in National Defense; not only does it include the medical proposed set-up, but it also includes all the other vast numbers of organizations and agencies involved in a comprehensive plan for Civilian Defense.

This has not been acted upon by Congress, as far as I know, up to the present moment, and when it will be acted upon, I do not know. I doubt whether it can be changed to a great degree from the fundamental part of the set-up.

I hope that we will have in the JOURNAL for your meditation and perusal the details of this proposed outline, and perhaps you will be able to follow it more closely that way.

I had planned to show you a few slides on the screen in order to give you an idea of the general set-up proposed. However, that is not feasible at the moment. We will put them in the JOURNAL for you to see.

I want to call to your attention a very important document, a law passed by the Legislature the 29th of April, 1949. Gentlemen, it affects every last one of us. I think that perhaps we will put some of that law in the JOURNAL so that you will be familiar with it, because there are some very important phases in connection with it. It is one of the most comprehensive plans for Civilian Defense that could be possibly voted. The Governor has practically unlimited power, and he can declare a State of Emergency, at a local level or for the whole state. He could throw machinery in which certainly ought to be able to handle any kind of emergency, if the necessary personnel were trained for that duty.

The Governor has the power, Ladies and Gentlemen, to institute that program, to coördinate it with all the adjoining state programs, to enlist aid from the adjoining states, in case of disaster that cannot be handled with the personnel at our command.

He has the power to send personnel to other States. He has the power to send personnel to help the national program or whatever it may be, without any further legislation. He has the power to use any kind of equipment in the State of Maine. He can take the equipment, and if it is damaged, we will have to pay for it. There is no limit on the amount of expense. It is just blanket coverage. He can spend the necessary money to handle it. Also, he has the power to enlist the services of any person in the State.

Now, I don't like the word "enlist." But, it is interesting to know what happens when you read the fine print. It goes on to say that any person who refuses to heed that request, and then concludes with the services for taking care of the injured, or the ill, or any person involved in this thing — in other words, it includes medical care in its provisions of the article there. It says in this fine print that anyone who refuses, without adequate reason, to heed that request is subject to a fine of \$1,000 or to imprisonment for eleven months or both.

So that if the Governor asks any of you, in an emergency, to render service, I would certainly recommend that you give the matter very serious consideration and that you don't go off fishing some place.

When the Governor, or somebody in his name, asks you to render assistance, I would recommend that you do so.

There is one thing that I think the Maine Medical Association probably could do, and that would be to arrange with the Governor and the Council and the Director of Civilian Defense, which the Governor has the power to appoint in any part of the State without any further ado, so that we be allowed representation on his Advisory Committee that is set up in this legislation.

A great many people were included in this. The Fire Chiefs' Association had the privilege of appointing a representative; also the Chiefs of Police had the same privilege of having one of their representatives sit on this particular Council.

There is no provision made for a representative from the medical society, or anyone who would represent the physicians or surgeons of the State.

The Commissioner of Health and Welfare is automatically a member of the Board, as set up.

However, it says here that the Governor shall be a member ex-officio, and he has the privilege of designating other people to sit on this Council, without any further legislation.

Now, this legislation is all set up in the State of Maine. It provides for the local Civilian Defense Set-up. And that would be under the Mayors of the cities. They will appoint Directors of Civilian Defense, who will have associate Directors under them who will carry the various phases of the whole set-up out, one of which is the medical set-up.

There is a mobile unit provided for. Incidentally, the Governor can indicate that he thinks one is not adequate, and he can set up any number at his discretion. This set-up includes some 500 people, and they can be paid for their services and for their training, and they can be sent out of the State.

Now, I should think that we are at the place, where certainly some constructive move should be made, regarding the set-up.

I think that as an Association, we should ask the Governor to create this organization to put it into effect, which he is now entitled to do at his discretion.

He has asked for a survey of the facilities of the State to see whether they are adequate for the casualties, in case of war or any other disaster.

I think that we should urge that he set this organization in motion and order that surveys of hospital facilities and other related facilities be made, so that we can know where to put our casualties, in case we have them, either from a civil or a military angle.

Of course, they should be adequate to include some 50,000 to 100,000 casualties, despite the fact that one of the representatives of the Atomic Energy Commission, I noticed the other day, said that Maine didn't need to worry. However, I am not quite sure how much military experience he has had. I cannot conceive anyone coming over the ocean, here, who would want to leave some of the air fields that we have on this planet, for, if a man wanted to come in here and make a successful killing, he certainly isn't going to leave these air fields here, for there would be a good way to cripple us.

We should encourage the Governor to put the set-up in motion, and especially to get some of the surveys done, for that information is badly needed, in the event we do have any large number of casualties.

We should also be thinking about our set-up for our part that we will play in this set-up, as doctors. About 50 per cent of us will be in the armed services in another war; another 50 per cent will be at home. Of course, everyone who is left at home will be in a civilian unit. You will be in it if you are home. The Governor says that you can either do it or he will do it for you. He has the power to do it, in this State. The biggest share of you who do general practice will be in first-aid and assistance work.

The set-up nationally, and probably by state-wide set-up will also follow that same thing, as well as for specialists in certain fields, the orthopedists, ophthalmologists and the



various psychiatric specialists and the more permanent setups.

There is one little joker. Dr. Parran's recommendations amount to about 60 per cent of the personnel involved in this work being specialists. So far, there aren't that many.

That brings me to the final thing that I should like to suggest. That we consider getting out a questionnaire that will obtain information for us about our experience and training, so that it could be worked up and perhaps our professional personnel will utilize it to the best advantage. We should know who is going to be available. And, if we use the system the Army uses for its professional personnel, we will obtain most of that information; there might have to be a few things added.

I think that we should begin sending out the questionnaire, and classifying our personnel, so that we can best utilize it. [Applause]

CHAIRMAN GOODWIN: Thank you very much, Dr. Steele.

Are the Delegates from the Fourth District now ready to make their nomination for Councilor.

A DELEGATE: The Delegates from the Fourth District would like to nominate R. L. Torrey of Searsport, Waldo County, to succeed Dr. Small, in his unexpired term. I so move the nomination.

*This motion* was duly seconded and was carried.

CHAIRMAN GOODWIN: It is with some trepidation that I take up the last article on the program, which refers to the motion or a statement that was made the last thing yesterday relative to an increase in the Medical Examiner life insurance fees. There was quite a lot of discussion and a sudden tangling of the motions, etc., and then there was a motion to lay the matter on the table.

I await your wish in this matter, as to whether to take it off the table or not.

DR. FRANKLIN F. FERGUSON, Portland: I move that this matter be left on the table.

DR. ERVIN A. CENTER, Steep Falls: Can this be discussed, or can it be taken off the table, or what? It seems to me to be a sensible thing to do, to take it off the table, and have it studied and reported back at the next meeting.

CHAIRMAN GOODWIN: What Committee would take care of that?

DR. CENTER: Whatever committee you might consider advisable to do that.

CHAIRMAN GOODWIN: Do you wish to make a motion on that?

DR. KINGHORN: It doesn't make any difference what we do about it, one way or the other. The insurance companies

give us a fee to follow the examination. But, I think that we should take action and refer it to the insurance companies, that we want an increase in our fees, and they can do as they please, and we will take it or leave it.

DR. EVERETT: I wonder if it wouldn't be in order if we passed a motion to advise the Governor that we would like to have a medical member on his Advisory Committee, on this Civilian Defense business?

CHAIRMAN GOODWIN: We will decide on the present motion first.

There is a motion before the house to table this suggestion regarding the insurance examining fees. I await your decision on the motion to table. Those who are in favor will please signify by raising their hands. Those opposed?

*Fifteen hands* were raised as being for the motion, and seven, as against the motion to table, and the motion was carried.

CHAIRMAN GOODWIN: Is there anything else to come before the meeting at this time?

If not, I will ask Dr. Everett to speak of that suggestion now.

DR. EVERETT: I thought that we did nothing about the excellent report on Civilian Defense, and the Committee made a suggestion that we have a medical man on the Advisory Committee, to be appointed by the Governor. We should move that we confer with the Governor regarding appointing a medical man on his Advisory Committee. I so move.

*This motion* was duly seconded by several of the members present and was carried unanimously.

CHAIRMAN GOODWIN: We will instruct the Secretary or the Council to carry out this procedure.

Is there any further business to come before the meeting?

DR. FRANK SMITH: Mr. Chairman, I believe that there was no vote taken on something that Dr. Vickers brought up, which meant a tax of a dollar and filling out a form. He said that he would take it for granted.

CHAIRMAN GOODWIN: There was no action by the assembly. There was no motion and no action. If you feel that there should be, it is your privilege at this time to make a motion, but I do not understand that this assembly acted one way or another on the proposition. We have no record of it.

Is there any further business to come before the meeting? If not, a motion is in order to adjourn.

Upon Motion duly made and seconded, it was voted to adjourn.

[Adjourned at 6:40 o'clock in the evening.]

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Articles—Clinico-Pathological Exercises

	Page		Page
<b>A</b>		<b>G</b>	
Acute Appendicitis with Perforation: A Review of Thirty-three Cases (Taylor, Robert L.)	213	Glaucoma in Young Adults (Hill, Howard F., and Dennis, Richard H.)	3
Amicrobic Pyuria (Emanuel, Meyer)	133	Government's Responsibility for the Health of its Citizens (Lawrence, Joseph S.)	315
Anesthesia for the Cardiac Patient (Lincoln, John R., and Martin, Ralf)	226	<b>H</b>	
Anesthesia in the Hypertensive Patient (Clapperton, Gilbert)	59	Hard of Hearing Children, Clinic for (Hill, Frederick T., and Sataloff, Joseph J.)	1
Antibiotic Recent Trends (Thompson, Philip P., Jr.)	43	Head Injuries:	
Antidiuretic Effect of Demerol and of Methadon on Mercurial Diuresis in Congestive Heart Failure, A Comparison of the (Steele, Charles W.)	277	Neuropsychiatric and Medical Aspects of (Jones, Paul A.)	101
<b>B</b>		Surgical Aspects of (Maltby, George L.)	102
Bronchiectasis, Treatment of (Brown, Lloyd)	258	Hospital Diets and Doctors (Grimmer, Eleanor)	243
<b>C</b>		Hypertension:	
Cancer of the Cervix, Twenty Years' Experience with (Holt, William)	221	During Pregnancy (Sewall, Kenneth W.)	8
Cancer of the Larynx (Provost, P. E.)	125	Surgical Aspects of (Maltby, George L.)	64
Carcinoma of the Colon (Todd, Albert C.)	365	Urological Aspects of (Mummelaar, Joseph)	61
Cardiac Arrest with Recovery (Ridlon, Magnus; Feeley, Robert, and Dwyer, Clement)	62	<b>I</b>	
Cervicitis (Coulton, Donald)	358	Infantile Cortical Hyperostosis (Bauman, Clair S., and Lubell, Moses F.)	5
Clinical Evaluation of a Newer Anti-Histaminic Chlor-Trimeton (Vickers, M. A., and Barrett, R. J.)	356	Infantile Cortical Hyperostosis (Williams, Derek, and Thacher, Henry C.)	286
Clinical Evaluation of Pyrrolazote and Orthoxine in Allergic Diseases (Zolov, Benjamin)	105	Industrial Medicine at the Saco-Lowell Shops (Barden, Frank W.)	181
Clinical Evaluation of Trimeton (Goldman, H. I.)	111	Industrial Physician and the Family Doctor (Russell, Blinn W.)	79
Clinico-Pathological Exercises (From the Eastern Maine General Hospital, Maine General Hospital, and St. Mary's General Hospital):		Intestinal Obstruction Due to Enterolithiasis (Appel, John F.)	229
Arteriosclerotic Aneurism of Thoracic Aorta	112	Isopropyl Alcohol Poisoning with Acute Renal Insufficiency (Chapin, Milan A.)	288
Benign Leiomyoma in the Myometrium	264	<b>J</b>	
Chronic Cholecystitis	83	Juvenile Delinquency and Criminal Homicide (Thom, D. A.)	176
Cirrhosis of the Liver	17	<b>M</b>	
Glioblastoma Multiforme	299	Maine State Police (McCabe, Francis W.)	318
Leiomyoma of the Duodenum	66	Malignant Disease of the Larynx (Cummings, George O.)	204
Malignant Lymphoma Involving Retro-orbital Tissues..	186	Meconium Ileus of the Newborn (Rheinlander, Harold F.)	368
Poliomyelitis	352	Medical Records—Why? (Moody, Barbara)	235
Ruptured Diverticulum of Cecum	47	Medical Social Service at the Maine General Hospital (Klassen, Ethel W.)	239
Colpectomy, In the Management of Prolapse of the Uterus and Vagina (Sweatt, L. A.)	75	Mental Defectives in a Mental Health Clinic, Work with (Simpson, Margaret R.)	38
Coordination-Cooperation vs. Polio (Ruhlin, Carl W.)	347	Myasthenia Gravis with Thymoma (Kirkham, D.)	138
Coronary Vascular Bed, Volume of the (Gottlieb, Julius; Goodof, Irving L., and Kangas, Vieno)	35	<b>O</b>	
Cysts and Sinuses of the Neck (Gaston, Eugene A., and Albro, Ward A.)	361	Obstetrical Problems (Humphreys, E. D.; Webber, M. A., and Briggs, Paul R.)	332
Cytological Diagnosis in Laboratory of Small Hospital, Establishment of (Everett, H. S., and Boddington, Mary)	256	Organization and Administration of the Emergency Polio Service (Curran, Frank C.)	345
Cytology and Uterine Cancer Detection in General Practice (Ayre, J. Ernest, and Ayre, W. Burton)	253	<b>P</b>	
<b>D</b>		Prenatal Care, Better (Lorimer, Robert V.)	208
Dermatophytosis (Jillson, Otis F.)	110	Preoperative Preparation and Postoperative Care of the Surgical Patient (Lester, D. H. R.)	321
Diagnostic Office Procedures, Some (Holt, C. Lawrence)..	39	Presidential Address (Ames, Forrest B.)	173
Drugs, Newer (Chapin, Milan)	40	Private Practice in Eastport, Maine—Statistical Analysis of (Baker, Richard S.)	262
Duodenal Ulcers (DuMais, Alcid F.)	81	Protein Depletion in Surgery (Reynolds, John F.)	10
<b>E</b>		<b>R</b>	
Early Pertussis Immunization (Ervin, Edmund N.)	13	Retrodisplaced Uterus (Larkin, Charles L.)	328
Epidermic Diarrhea of the Newborn (Porter, Joseph E.; Stetson, Chandler A., and Foster, Thomas A.)	217	Rickets: Presentation of Four Cases (Erickson, G. Walter)	282
<b>F</b>		Relief of Asthmatic Seizures with Micronized Epinephrine 1:1000 (Maletta, A. L.)	108
Fluorine and Its Effect on Teeth (Marcotte, H. I.)	77		
Fractures of the Femoral Neck, Important Considerations in Management of (Gieson, Joseph H.)	14		



	Page
<b>S</b>	
Service for the Veteran at the Neuro-psychiatric Hospital, Togus, Maine (Zeltzerman, Israel) .....	126
Slipped Capital Femoral Epiphysis (Goldman, Morris E.) .....	291
State Aid—The Enigma of Hospital Administration (Barker, John C.) .....	233
Surgery in the Treatment of Gastro-Duodenal Ulcer (Nelson, John A.) .....	128
Surgical Problems in Children, Some of the (Lester, D. H. R.) .....	99
Surgical Treatment of Varicose Veins (Bunker, Willard H.) .....	251
<b>T</b>	
Tachycardia and Its Treatment (Beliveau, Bertrand) ....	78
<b>U</b>	
Unmarried Mother, Problem of the (Dalton, Ruth M.) ...	241

Authors

Albro, Ward A., Bangor, Maine .....	361
Ames, Forrest B., Bangor, Maine .....	173
Appel, John F., Portland, Maine .....	229
Ayre, J. Ernest, Montreal, Canada .....	253
Ayre, W. Burton, Montreal, Canada .....	253
Barden, Frank W., Biddeford, Maine .....	181
Barker, John C., Portland, Maine .....	233
Barrett, R. J., Bangor, Maine .....	356
Bauman, Clair S., Waterville, Maine .....	5
Beliveau, Bertrand, Lewiston, Maine .....	78
Boddington, Mary, St. Stephen, N. B. ....	256
Briggs, Paul R., Hartland, Maine .....	332
Brown, Lloyd, Bangor, Maine .....	258
Buker, Richard S., Eastport, Maine .....	262
Bunker, Willard H., Calais, Maine .....	251
Chapin, Milan A., Lewiston, Maine .....	40-288
Clapperton, Gilbert, Lewiston, Maine .....	59
Coulton, Donald, Bangor, Maine .....	358
Cummings, George O., Portland, Maine .....	204
Curran, Frank C., Bangor, Maine .....	345
Dalton, Ruth M., Portland, Maine .....	241
Dennis, Richard H., Waterville, Maine .....	3
DuMais, Alcide F., Lewiston, Maine .....	81
Dwyer, Clement S., Bangor, Maine .....	62
Emanuel, Meyer, Togus, Maine .....	133
Erickson, G. Walter, Lewiston, Maine .....	282
Ervin, Edmund N., Waterville, Maine .....	13
Everett, H. S., St. Stephen, N. B. ....	256
Feeley, Robert, Bangor, Maine .....	62
Foster, Thomas A., Portland, Maine .....	217
Gaston, Eugene A., Framingham, Massachusetts .....	361
Giesen, Joseph H., Waterville, Maine .....	14
Goldman, H. I., Denver, Colorado .....	111
Goldman, Morris E., Lewiston, Maine .....	291
Goodof, Irving L., Lewiston, Maine .....	35
Gottlieb, Julius, Lewiston, Maine .....	35
Grimmer, Eleanor, Portland, Maine .....	243
Hill, Frederick T., Waterville, Maine .....	1
Hill, Howard F., Waterville, Maine .....	3
Holt, C. Lawrence, Portland, Maine .....	39
Holt, William, Portland, Maine .....	221
Humphreys, E. D., Pittsfield, Maine .....	332
Jillson, Otis F., Boston, Massachusetts .....	110
Jones, Paul A., Union, Maine .....	101
Kangas, Vieno, Lewiston, Maine .....	35
Kirkham, D., Togus, Maine .....	138
Klassen, Ethel W., Portland, Maine .....	239
Larkin, Charles L., Waterbury, Connecticut .....	328
Lawrence, Joseph S., Washington, D. C. ....	315
Lester, D. H. R., Schenectady, New York .....	99-321
Lincoln, John R., Portland, Maine .....	226
Lorimer, Robert V., Portland, Maine .....	208

	Page
Lubell, Moses F., Waterville, Maine .....	5
Maietta, A. L., Winchester, Massachusetts .....	108
Maltby, George L., Portland, Maine .....	64-102
Marcotte, H. I., Lewiston, Maine .....	77
Martin, Ralf, Portland, Maine .....	226
Memmelaar, Joseph, Bangor, Maine .....	61
Moody, Barbara K., Portland, Maine .....	235
McCabe, Francis W., Augusta, Maine .....	318
Nelson, John A., Togus, Maine .....	128
Porter, Joseph E., Portland, Maine .....	217
Provost, P. E., Togus, Maine .....	125
Reynolds, John F., Waterville, Maine .....	10
Rheinlander, Harold F., Bangor, Maine .....	368
Ridlon, Magnus, Bangor, Maine .....	62
Ruhlin, Carl W., Bangor, Maine .....	347
Russell, Blinn W., Lewiston, Maine .....	79
Sataloff, Joseph J., Waterville, Maine .....	1
Sewall, Kenneth W., Waterville, Maine .....	8
Simpson, Margaret R., Augusta, Maine .....	38
Steele, Charles W., Lewiston, Maine .....	277
Stetson, Chandler A., Portland, Maine .....	217
Sweatt, L. A., Auburn, Maine .....	75
Taylor, Robert L., Portland, Maine .....	213
Thacher, Henry C., Lewiston, Maine .....	286
Thom, D. A., Boston, Massachusetts .....	176
Thompson, Philip P., Jr., Portland, Maine .....	43
Todd, Albert C., Brewer, Maine .....	365
Vickers, Martyn A., Bangor, Maine .....	356
Wadsworth, Richard C., Bangor, Maine .....	352
Webber, M. A., Pittsfield, Maine .....	332
Williams, Derek, Lewiston, Maine .....	286
Zeltzerman, Israel, Togus, Maine .....	126
Zolov, Benjamin, Portland, Maine .....	105

Editorials

A. M. A. Assessment .....	50
A. M. A. Plans Nationwide Health Education Program ...	24
About the House of Delegates .....	143
A "Brief" of the Program in Brief .....	116
Doctor in Cabinet Proposed .....	50
Dr. Ralph J. Gampell .....	303
Interim Session of the House of Delegates .....	266
It Happened in June at the Ninety-fifth Annual Session ..	193
The Council Votes to Hold Fall Clinical Session in Water- ville .....	245
The Fall Clinical Session .....	336
The Nation's Health—A Ten-Year Program .....	68
The Ninety-fifth Annual Session Golf Tournament .....	246
The Ninety-fifth Annual Session Program .....	86

General

A

American Medical Association Program for the Advance- ment of Medicine and Public Health .....	51
---	----

B

Book Reviews:	
Modern Clinical Psychiatry (Arthur P. Noyes, M. D.)..	122
Occupational Marks and Other Physical Signs (Fran- cesco Ronchese, M. D.) .....	57

C

Correspondence:	
A. M. A. Assessment (H. D. Ross, M. D., Sanford, Maine) .....	24
Fees for Medical Services in "Home Town Medical Care Program for Veterans" .....	34
Medical Supplies Which May Be Furnished Eligible Veterans on Prescription .....	306

	Page
<b>County Medical Societies:</b>	
New Members .....	32-57-72-94-146-200-306
Society Notes:	
Androscoggin .....	338
Aroosfook .....	144
Cumberland .....	30-144-198
Hancock .....	32-54-70-92-144-304-338-372
Kennebec .....	32-54-70-92-119-304-372
Knox .....	32
Lincoln-Sagadahoc .....	32-54-72-146-304-338-372
Oxford .....	198-338
Piscataquis .....	72-146-340
Somerset .....	72-119-268
Washington .....	56-119-198-304-374
York .....	57-94-146-340-374

M

<b>Maine Board of Registration of Medicine:</b>	
Physicians Licensed to Practice in Maine .....	146-248
Maine General Hospital Issue, Foreword On .....	203
Maine Medico-Legal Society Annual Meeting .....	268

**Maine Medical Association:**

<b>Annual Reports:</b>	
Committees, Special:	
Amy W. Pinkham Fund .....	150
Attendant Nurse Education .....	151
Blood Transfusions .....	151
Civilian Medical Defense .....	379
Conservation of Vision .....	150
Health Insurance .....	150-309
Maternal and Child Welfare .....	271
National Education Campaign .....	308
Revision of Constitution and By-Laws .....	314-378
Rural Health .....	151
Tuberculosis .....	150
Veterans' Affairs .....	271
Committees, Standing:	
Legislative .....	149
Medical Education and Hospitals .....	150
Public Relations .....	149
Council:	
1st District (Eugene H. Drake) .....	149
2nd District (James A. MacDougall) .....	149
3rd District (C. Harold Jameson) .....	271
4th District (Foster C. Small) .....	149
6th District (Martyn A. Vickers) .....	271
Chairman (C. Harold Jameson) .....	272
Delegates:	
American Medical Association .....	69-273
Connecticut .....	274
New Hampshire .....	275
Executive Secretary (W. Mayo Payson) .....	344
Necrologist "In Memoriam" .....	148
Secretary-Treasurer .....	152
Treasurer (Annual Audit) .....	201

	Page
<b>Annual Session, 1949 (Ninety-fifth):</b>	
Commercial Exhibits .....	157
Councillors Elected:	
4th District (Raymond L. Torrey) .....	191-380
5th District (Raymond E. Weymouth) .....	191-378
6th District (Norman H. Nickerson) .....	191-378
Chairman (C. Harold Jameson) .....	191
County Delegates .....	156
General Assembly .....	341
Proceedings, House of Delegates:	
1st Meeting .....	271
2nd Meeting .....	342
Program .....	117-153
Budget, 1949-1950 .....	193-273
Clinical Session Program, 1949 .....	298
Committees, 1949-1950:	
Special .....	195
Standing .....	194
Delegates to 1949 Annual Sessions:	
American Medical Association .....	157
New England Medical Societies .....	157
Honorary Members, 1949 .....	155
President, 1949-1950, Ralph A. Goodwin .....	189-190
President-elect, Foster C. Small .....	191-193-341
President's Page:	
Forrest B. Ames .....	23-49-85-115-142
Ralph A. Goodwin .....	192-244-265-302
Roster, Maine Medical Association (May 31, 1949):	
Alphabetical List .....	165
County List .....	160
Woman's Auxiliary .....	196

N

News and Notes ...	33-57-72-94-122-146-200-248-268-306-340-374
--------------------	---

W

Woman's Auxiliary to the Maine Medical Association ....	196
What Will We Do with the Doctor's \$25?—The National Campaign Plan of Procedure .....	87

Necrologies

Coombs, George H. (Waldoboro) .....	28
Dolloff, David E. (Biddeford) .....	29
Hagopian, Leon G. (Southwest Harbor) .....	376
Hardy, Theodore E. (Waterville) .....	52
Herlihy, Edward L. (Bangor) .....	27
Libby, Ara B. (South Gardiner) .....	376
Merrill, E. Delmont (Dover-Foxcroft) .....	337
Pepper, John L. (South Portland) .....	53
Popplestone, Charles B. (Fairfield) .....	91
Sturtevant, James S. (Dixfield) .....	197
Thompson, Herbert E. (Bangor) .....	91
White, Ernest A. (Columbia Falls) .....	147

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## Index to Advertisers

Abbott Laboratories .....	XIV
Ayerst, McKenna & Harrison .....	XXII
Blackwell, Elmer N. ....	XX
Camel Cigarettes .....	IX
Camp, S. H. & Co. ....	XIII
Coca-Cola .....	XX
Crane Discount Corp. ....	XX
Fleet Co. Inc., The C. B. ....	XVII
Frye Company, Geo. C. ....	XVIII
Gay Private Hospital .....	XIX
Hanger .....	XII
Jones' Private Sanitarium .....	XIX
Kremers . Urban Company .....	X
Lederle Laboratories Division .....	VII
Lilly & Company, Eli .....	I-XVIII
Maine Surgical Supply Co. ....	V
Mead Johnson & Company .....	XXIII
Medical Auditing Counsel .....	XVIII
Mutual Benefit Health & Accident Assn. .	VI
Noyes & Chapman, Inc. ....	XX
Ovaltine .....	XVI
Parke, Davis & Company ....	II-III
Physician's Casualty Association .....	XII
Schering Corporation .....	XV
Scott, H. F. ....	XVIII
Searle, G. D. & Co. ....	373
United States Brewers Foundation ....	XII
Upjohn .....	XI
Washingtonian Hospital .....	XX
Winthrop-Stearns, Inc. ....	VIII

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